

THOMAS PRENTICE SANBORN: HIS LIFE, CAREER, AND EXTANT ORGANS

BY

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Dedicated in memory of Lorena A. Arps

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Chapter I. Thomas Prentice Sanborn's Life from 1823 to 1874:

His Apprenticeship with E. & G.G. Hook & Hastings

Thomas Prentice Sanborn (1823–1903) was born in Sanbornton, New Hampshire on November 17, 1823, and spent the first three decades of his career as a carpenter and farmer. In 1870, at the age of forty-seven, he learned organ construction and design with E. & G.G. Hook & Hastings, working for their firm for four years. Thomas Prentice Sanborn's tutelage with E & G.G. Hook & Hastings helped lay the foundation for his own approach to organ-building; his instruments resembled Hook's in disposition and tonal design.

Thomas Prentice Sanborn's ancestors were among the first settlers in the Colonies. A genealogy of the surname Sanborn entitled, "Samborne or Sanborn in England and America 1194–1898," was written by V. C. Sanborn and printed in 1899. According to this genealogy, Sanborn was first spelled Samborne in America. Eventually the "e" was eliminated, and by 1750 the "m" was replaced with an "n." The surname Samborne was derived from the Anglo-Saxon words *Sand* and *Burma* (stream), meaning a sandy location with a stream.¹ V. C. Sanborn suggested five possibilities for the geographic location on which the family name, Samborne, was based: Sambourne, a division of the parish of Warminster in Wiltshire; the Sambourne Bridge in northern Wiltshire; Sambourne in the parish of Coughton, Warwick; Sandbourne, a carpet-

¹ Sanborn, V.C. *Genealogy of the Family of Samborne or Sanborn in England and America 1194-1898*. Privately Printed for the Author, 1899.

weaving town in Worcestershire, England; or Sandburn, a hamlet of the parish of Stockton-on-the-Forest in Yorkshire.²

The Reverend Stephen Bachiler was the first descendant of the Sanborn lineage to arrive in America. He originated from Hampshire and was a Vicar of Wherwell.³ On March 9, 1642, he boarded the *William and Francis* for America with his second wife, Helen, and three grandchildren, John, William, and Stephen Samborne. They arrived in Boston, Massachusetts, on June 3, 1632.⁴ The Reverend Bachiler was a reformer who had “suffered much at the hands of the Bishops.” He fled to America in his old age with the hope of finding more religious and social freedom.⁵

The youngest of the Reverend Bachilor’s six children, Anne, was born in 1600 and married William of Brimpton, Berkshire County, England (a Samborne) in 1619. Anne was the mother of John, William, and Stephen Sanborn. V. C. Sanborn states that “circumstantial evidence leaves no reasonable doubt that the father of John, William, and Stephen Samborne of Hampton was one of the Hampshire Sambornes and was a descendant of Nicholas of Mapledurham.”⁶ There is no record that Anne traveled to America with her father and sons, and also no trace of her sons in the new land until 1639.

Thomas Prentice Sanborn was a direct descendant of John Sanborne. John Sanborne married Mary, the daughter of Robert Tuck, and their son Richard (b. January 4, 1655) was the first of Thomas Prentice Sanborn’s ancestors to be born in the Colonies. Richard Sanborne married Ruth Moulton, who died in 1685, and then married Mary

² Sanborn, *Genealogy*, 3.

³ Sanborn, *Genealogy*, 59.

⁴ Sanborn, *Genealogy*, 74.

⁵ Sanborn, *Genealogy*, 60.

⁶ Sanborn, *Genealogy*, 1.

Boulter, the widow of Nathaniel Boulter. Richard and Mary's son, John Sanborn (b. November 6, 1681), was Thomas Prentice Sanborn's great-great grandfather. He started out as a soldier from Hampton, New Hampshire, in 1708, and later rose to the rank of sergeant in Lovewell's War of 1724. At this point he was promoted to the rank of ensign.⁷ Ensign John's son, Lieutenant Ebenezer Sanborn (Thomas Prentice Sanborn's great grandfather), was born on March 4, 1712, and lived in North Hampton and Hampton, New Hampshire.⁸ Lieutenant Ebenezer was a town clerk and sheriff. He was a grantee of Sanbornton, New Hampshire, and was described in V. C. Sanborn's genealogy as a large, prominent man.

Lieutenant Ebenezer Sanborn's son, Ebenezer Sanborn (Thomas Prentice Sanborn's grandfather), was born on April 15, 1755, in Hampton. He married Huldah Philbrick and they resided in her hometown of Sanbornton. Ebenezer's youngest son and Thomas Prentice Sanborn's father, Simeon, was born on October 8, 1793. Thomas Prentice never knew his grandfather, since Ebenezer died from a fall from his horse in 1820.

According to Moses T. Runnel's book, "A History of Sanbornton, New Hampshire," Thomas Prentice Sanborn was the son of Simeon Sanborn and Lucy S. Palmer.⁹ Simeon was a farmer and a veteran of the War of 1812. He was also elected Trustee of the Woodman Sanbornton Academy in 1840.¹⁰ Simeon and Lucy married on December 3, 1817. They resided in Sanbornton, New Hampshire, and had three children: Abigail (b. April 2, 1820; d. May 3, 1838), Thomas Prentice (b. November 17, 1823), and

⁷ Sanborn, *Genealogy*, 95.

⁸ Sanborn, *Genealogy*, 117.

⁹ Runnel, *A History of Sanbornton*, 664.

¹⁰ Friesen, unpublished research.

Charles Edwin (b. August 16, 1828). Simeon worked on his father's farm (Ebenezer Sanborn) until 1848 when he relocated to Plymouth Village and became a "highly respected" deacon for the Congregational Church.¹¹ Lucy Sanborn died on September 9, 1876, and Simeon spent his final days farming with his son, Charles Edwin, in Campton Grafton, New Hampshire.

Thomas Prentice Sanborn (figure 1a, on page 23) married Elizabeth Ann, the daughter of James and Jane (*née* Gibson) Sanborn, on April 12, 1846. They had one daughter, Abigail Jane, on October 9, 1847. Abigail married Edgar Merrill, a farmer from Campton, New Hampshire, on September 13, 1871. Abigail J. Sanborn-Merrill (1847–1876) and Edgar resided in Boston, Massachusetts and had three children: Herbert M. Merrill (b. 1871), Abbie Merrill (b. 1872), and Martha E. Merrill (b. 1873). Martha E. Merrill married Weldon P. Shute and they had two children: Donald (1901–1991) and Dorothy S. Shute (1900–?). Dorothy S. Shute married Earl Everett Bates (1891–1974) and they resided in Laconia, New Hampshire, and had three children: Donald L. Bates, Mary Ruth Bates (?–1933), and Richard D. Bates (?–1934).

Elizabeth Ann, Thomas Prentice Sanborn's first wife, died of consumption on December 17, 1848 at the age of twenty-five or twenty-six. He married his second wife, Amelia A. York (b. November 26, 1827, d. unknown), on April 9, 1850. On page 24, figure 1b, is a photograph of Amelia A. York. Thomas Prentice and Amelia had three children: Elizabeth Ann (b. May 9, 1853), William Marshall (b. September 4, 1855), and Emma Amelia (b. March 8, 1872; d. 1875).

Thomas Prentice Sanborn's daughter, Elizabeth Sanborn, married Howard Emery (1853–1941), a native of Boston and a lieutenant. At the time of Thomas Prentice

¹¹ Runnel, *A History of Sanbornton*, 664.

Sanborn's obituary publication, Howard Emery was stationed at New Orleans. He and his wife Elizabeth were listed in Portland, Oregon, in the 1910 census; in Lowell, Massachusetts in the 1920 census; and in Washington, D.C. in the 1930 census. Howard died in the town of Laconia, New Hampshire, where the descendants of Thomas Prentice Sanborn's oldest daughter, Abigail Jane, resided. The census records do not report that Elizabeth Ann and Howard Emery had children. Information on Thomas Prentice Sanborn's son, William Marshall, will be provided in Chapter Three.

According to the 1860 U.S. Federal Population Census, Thomas Prentice Sanborn's second residence was Campton Grafton, New Hampshire. At the time of this census, Thomas Prentice was thirty-seven, Amelia was thirty-two, Abbie Sanborn was twelve, Lizzie Sanborn was seven, and Willie Sanborn was four.¹² Sanborn continued to follow the career path of his ancestors, working with his family as a farmer and carpenter during his years in Campton. The work ethic he gained as a farmer and craft he learned as a carpenter were surely vital qualities he utilized while overseeing his own organ-building company more than a decade later.

The Sanborn family moved to Boston, Massachusetts in the early 1870s. Although the exact date of their relocation is unknown, they resided in Boston, Ward 15, Suffolk at 220 Ruggles Street. Emma Amelia, his fourth daughter, and third child with his second wife Amelia, was born while the family was living at this location on March 8, 1872.

Thomas Prentice Sanborn apprenticed with and worked for E. & G. G. Hook & Hastings while living in Boston. This company was a premier pipe organ designing and manufacturing firm which did business from 1827–1935. It was begun by two brothers,

¹² 1860 U. S. Census.

Elias and George Greenleaf Hook. Frank Hastings became a partner with the firm in 1871. Aesthetic and tonal characteristics of E. & G.G. Hook's instruments display first-hand how American organ-building was influenced in this period by the English and, to a lesser extent, the German and French traditions. To trace the lineage from England to America (from the Hook brothers to William Horatio Clarke and Thomas Prentice Sanborn) a brief outline of the history of organ-building in America, with particular emphasis on the Boston area, will be provided in the following pages.

From 1534 to 1760, towns of the colonies were the center of activity for work, church, and school.¹³ Since most of the original settlers were Calvinists who saw the organ as a pagan instrument, the earliest organs in the United States were primarily parlor organs reserved for domestic devotions and entertainment, rather than public worship. Congregational singing was typically accompanied by a bass viol, or other instruments like the bassoon and cello.¹⁴ The first recorded use of an organ in church was at a Lutheran church in Philadelphia in 1703; it was a small positive organ that German settlers brought over in 1694.¹⁵ Boston, Massachusetts, was the largest city in the colonies and was an early leader in shipbuilding and lumbering.¹⁶ The Anglican churches in the region were the first to incorporate organs into their worship services and they established a long-standing American tradition of turning to England for a model for church music.¹⁷ Most of the organs purchased for American churches were imported

¹³ Ochse, *The History of the Organ*, 9.

¹⁴ Ochse, *The History of the Organ*, 10.

¹⁵ Williams, *The Organ*, 148.

¹⁶ Ochse, *The History of the Organ*, 9.

¹⁷ Ochse, *The History of the Organ*, 10.

from England and many of the organists who served these congregations were from Europe.¹⁸

One of the first organs documented in New England was the Brattle organ. This one-manual instrument was built in England and was imported circa 1708 to Boston.¹⁹ It was the property of Thomas Brattle; after Brattle died in 1713, he left the instrument to the Brattle Square Church.²⁰ When this institution declined his gift, it was given to Queen's Chapel (now known as King's Chapel). At this location, the instrument officially became one of the first pipe organs to be used for a worship service in the colonies.²¹ It was subsequently relocated several times before being restored by Charles Fisk in 1965.²² The following was the specification of the instrument in 1708:

Brattle Organ²³
c. 1708

Stopt Diapason 8' (49 Wood Pipes)
Principal 4' (49 Open Wood Pipes)
Fifteenth 2' Bass (25 Metal Pipes)
Fifteenth 2' Treble (24 Metal Pipes)
Sesquialtera II Bass (19th–22nd)
Sesquialtera II Treble²⁴ (12th–17th)

In 1756, the Brattle organ at King's Chapel was replaced with an organ by English organ builder Richard Bridge. This was at the time one of the few three-manual organs in America. The Great division had a manual compass of fifty-seven notes from

¹⁸ Ochse, *The History of the Organ*, 10.

¹⁹ St. John's Episcopal Church, <http://www.stjohnsnh.org/tour/single-gallery/5280086> (accessed August 24, 2013).

²⁰ Ochse, *The History of the Organ*, 20.

²¹ Ochse, *The History of the Organ*, 20.

²² St. John's Episcopal Church, <http://www.stjohnsnh.org/tour/single-gallery/5280086> (accessed August 24, 2013).

²³ "The Brattle Organ Restored."

²⁴ Ochse, *The History of the Organ*, 21.

GG to e3 and the Swell division had a compass that went as low as tenor f or g.²⁵ The organ did not originally have a pedal division, but one was added in 1824.²⁶

Soon other builders would leave their mark on American organ-building. Another organ imported to Boston from England was by a London builder, Abraham Jordan, for Trinity Church, Boston; it was a two-manual instrument with an enclosed Swell.²⁷ Johann Gottlob Klemm, who immigrated to the Colonies in 1733, was the first Saxon to build organs in America and built many small instruments plus one three-manual organ for Trinity Church, New York (1741).²⁸ David Tannenberg, a Moravian organ builder from Lititz, Pennsylvania, who was influenced greatly by the Silbermann school, was the first full-time organ builder in America; he built forty organs from 1758 to 1804.²⁹ Edward Broomfield, Jr. (1723–1746), was the first native colonist to build organs. Thomas Johnston (1708–1767) was the first professional organ builder in Boston and is credited with building three organs from 1752-1763, including organs for St. Peter's Church, Salem, Massachusetts and Old North Church, Boston.³⁰

The Colonies from 1760 to 1775 were marked by the conclusion of the Seven-Years War and a renewed loyalty to England and the King.³¹ Aside from instruments made by David Tannenberg, who built thirteen organs from 1765 to 1774, most organs of this time were imported from England by the renowned English organ builder John Snetzler.³² These organs were intended primarily for German and Anglican churches as many other denominations still believed organs were inappropriate for use in the worship

²⁵ Ochse, *The History of the Organ*, 20.

²⁶ Ochse, *The History of the Organ*, 20.

²⁷ Ochse, *The History of the Organ*, 25.

²⁸ Williams, *The Organ*, 148.

²⁹ Williams, *The Organ*, 148.

³⁰ Ochse, *The History of the Organ*, 25.

³¹ Ochse, *The History of the Organ*, 39.

³² Ochse, *The History of the Organ*, 41.

service.³³ Snetzler was born in Schaffhausen, Switzerland, in 1710, and trained with his cousin Johann Konrad Speisegger. Snetzler at first built small organs, later introducing new tone colors to English organs, one of which was a Solicional (sic), which sounded like a Violoncello for some organs and a Viole di Gamba for others.³⁴ His organs were described by Sir John Sutton (a British politician and colonial administrator), in 1847:

His instruments are remarkable for the purity of their tone, and the extreme brilliancy of their Chorus Stops, which in this respect surpassed anything that had been heard before in this country, and which have never since been equaled.³⁵

The Revolutionary War (1775–1783) took a serious toll on organ-building in America. Trade between England and America came to a virtual halt; as a result, very few organs were imported. “Many Anglican churches closed” and many “organs were destroyed or damaged.”³⁶

From 1810–1860 the young United States experienced a large growth in manufacturing. Organ-building during this industrial age was affected by the new “factory” mentality and featured a shift from Classical and Baroque ideals to Romantic. Experimentation with key action accelerated and the Barker lever, first brought to prominence by French organ builder Cavaillé-Coll, was introduced in America in the 1860s.³⁷

There was an upswing in demand for organs during this era for several reasons. Westward expansion had increased with the development of roads and railroads. In addition, the population had grown immensely due to immigration from European nations

³³ Ochse, *The History of the Organ*, 41.

³⁴ Bicknell, *The History of the English Organ*, 178.

³⁵ Bicknell, *The History of the English Organ*, 178.

³⁶ Ochse, *The History of the Organ*, 41.

³⁷ Ochse, *The History of the Organ*, 207.

to the young country. As cities grew, churches gained membership, and larger organs were needed to support congregational singing.

Boston, with its fast-growing population and vast industrial and commercial development, was the intellectual capital of America until the Civil War.³⁸ The Boston Philharmonic was founded in 1810; the Handel and Haydn Society formed in 1815. The local community became known for its great literary achievements and advancements in the arts. Boston also became the cultural center-point for American organ-building.³⁹ William Goodrich was the leader of organ-building in Boston in 1830 and trained Thomas Appleton, George Stevens, and Elias and George Hook.⁴⁰

William Goodrich was born in Templeton, Massachusetts, in 1777.⁴¹ He entered a partnership in 1812 with the Hayts brothers, Alpheus Babcock, and Thomas Appleton.⁴² Goodrich opened his own shop in 1813, and returned to work with Hayts, Babcock & Appleton in 1815. When the firm closed later that year, Goodrich became a partner with Mackay & Co.⁴³ This partnership ended in 1820, and Goodrich worked alone from 1821 until his death in 1833.⁴⁴ His company produced thirty-eight church organs and eleven chamber organs for the Boston area, and he trained nearly every influential organ builder to follow him in Boston. Thomas Appleton studied and worked with Goodrich from 1806 until the Mackay & Co. dissolved in 1820.⁴⁵ He then worked as an organ builder on his

³⁸ Ochse, *The History of the Organ*, 114.

³⁹ Ochse, *The History of the Organ*, 116.

⁴⁰ Williams, *The Organ*, 149.

⁴¹ Barnes, *Two Centuries*, 14.

⁴² Ochse, *The History of the Organ*, 116.

⁴³ Ochse, *The History of the Organ*, 116.

⁴⁴ Ochse, *The History of the Organ*, 116.

⁴⁵ Ochse, *The History of the Organ*, 116.

own with Henry Corrie as his voicer from 1824 until 1828, and he completed for Goodrich the instrument he was working on at the time of his death.⁴⁶

Elias (1805–1881) and George Hook (1807–1880) were sons of William Hook (1777–1867), a cabinetmaker in Salem, Massachusetts. Elias went to Boston to work for William Goodrich as an apprentice in 1821.⁴⁷ The Hook brothers went on to build “one of the most successful and important organ-building companies in the nineteenth century.”⁴⁸ “E. & G.G. Hook and their successors E. & G.G. Hook & Hastings and Hook & Hastings was the most-important nineteenth-century organ-building firm in New England, rivaled only by Ernest M. Skinner and the Aeolian Skinner Organ Company in the twentieth-century.”⁴⁹ It was one of the longest lasting organ-building companies in the United States.⁵⁰

Elias and George Hook opened their first organ-building shop in Salem in 1827 where they built fourteen chamber organs and five small church organs.⁵¹ In 1831, the E. & G.G. Hook Company relocated its shop to Friend Street in Boston.⁵² From 1831 to approximately 1841, E & G.G. Hook built four organs a year for churches in Massachusetts.⁵³ Three instruments were three-manuals and the remainders were smaller two-manual organs. The largest instrument they built between 1829 and 1849 was Opus 64 (1845) for Tremont Temple, Boston.⁵⁴ The next one hundred organs E & G.G. Hook constructed from 1849 to 1856 included nine three-manual instruments and one four-

⁴⁶ Ochse, *The History of the Organ*, 119.

⁴⁷ Owen, *The History of the Organ*, 162.

⁴⁸ Ochse, *The History of the Organ*, 122.

⁴⁹ Pinel, “E. & G.G. Hook,” 139.

⁵⁰ Pinel, “E. & G.G. Hook,” 139.

⁵¹ Owen, *The History of the Organ*, 162-165.

⁵² Owen, *The History of the Organ*, 162-165.

⁵³ Ochse, *The History of the Organ*, 122.

⁵⁴ Ochse, *The History of the Organ*, 124.

manual instrument, the Opus 149, fifty-four rank instrument for Tremont Temple in Boston (Opus 64 having been destroyed by fire).⁵⁵ They also secured numerous contracts for organs in other states throughout the country including Alabama, Tennessee, and Ohio.⁵⁶

American organ-building in the 1840s and 1850s “derived its direction from the organs imported from England in earlier times.”⁵⁷ E & G. G. Hook’s organs utilized the old GG manual compass until the 1840s, when they began building instruments with the newer C manual compass.⁵⁸ A fifty-four to fifty-six note range was standard for larger instruments, with the GG compass still used for some smaller instruments.⁵⁹ After 1840, E & G.G. Hook’s organs had a twenty-seven note pedal compass.

E. & G. G. Hook’s organs in the 1840s-1850s maintained a short swell compass for smaller instruments, with all ranks except the Stopped Diapason 8’ terminating at tenor c or f. This was still a feature of many smaller nineteenth century American organs; a vestige of this practice is found in the 1883 Sanborn, which will be discussed in Chapter 4. The Stopped Diapason was a divided stop that provided the full range (to C) for all other swell ranks of 8’ pitch. Toward the end of the century, many of E. & G.G. Hook’s larger instruments utilized a full compass for all swell stops.

Tonally, the early instruments of E. & G.G. Hook resembled the work of Goodrich and Appleton.⁶⁰ The Great divisions of Hook organs in the 1840s were based on an 8’ Open Diapason with a mellow, refined timbre. The 4’ and higher pitches on the

⁵⁵ Owen, *The History of the Organ*, 165.

⁵⁶ Ochse, *The History of the Organ*, 124.

⁵⁷ Ochse, *The History of the Organ*, 101

⁵⁸ Owen, *The History of the Organ*, 169.

⁵⁹ Ochse, *The History of the Organ*, 126.

⁶⁰ Ochse, *The History of the Organ*, 126.

Great were brighter than the 8' ranks, and the reeds blended with the chorus while adding dimension to the sound. In comparison with the Great, the Swell and Choir divisions were secondary and more chamber-organ-like, softer in timbre but similar in clarity to the Great. The Hook brothers were considered masters at voicing - the clarity of their principal choruses and particularly their reed pipes was evidence of their quality craftsmanship and artistry.⁶¹

In 1853, E & G.G. Hook built a new factory on Leverett Street, and by the end of the decade they had become famous as the largest organ-building factory in the country.⁶² They increased their production to twenty organs in 1854 building fifteen to eighteen organs a year from 1855 to 1860.⁶³ Elias Hook was the business director of the firm and George Hook was the voicer and tonal director. Frank Hastings (1836–1916) joined the company as an employee in 1855, working in the design department.⁶⁴

E & G.G. Hook continued to follow the early English models of organ-building into the 1850s, but by the late 1850s they began to observe advancements in English organ-building. This shift is evident in their organ for the Beneficent Congregational Society, Providence, Rhode Island (1855–1856). First, this instrument had a more bold and foundational tone than earlier Hook instruments, but still had the same brilliance, balance, and clarity of sound.⁶⁵ Second, the organ featured the first recorded concave and radiating pedalboard in America. Third, it had three pre-set combinations of stops that were activated by drawknobs at the console in addition to several combination pedals.⁶⁶

⁶¹ Owen, *The History of the Organ*, 171.

⁶² Ochse, *The History of the Organ*, 124.

⁶³ Owen, *The History of the Organ*, 179.

⁶⁴ Ochse, *The History of the Organ*, 124.

⁶⁵ Owen, *The History of the Organ*, 180.

⁶⁶ Owen, *The History of the Organ*, 181.

E & G.G. Hook continued to dominate the organ-building field into the 1860s. “By the 1860s the Hook company was turning out over thirty organs a year.”⁶⁷ In the mid-1860s, the Civil War greatly affected organ-building throughout the country as many churches no longer had the funds to purchase an instrument. Industry was more developed in the North and organbuilders in Boston and New York received most contracts during this period. The Hook company’s output dropped to fourteen instruments in 1862 and thirteen in 1863.⁶⁸

“The war years were not without their significant organs.”⁶⁹ October 31, 1863 marked the installation of a Walcker & Son organ in Boston Music Hall.⁷⁰ This instrument changed the organ-building field in America, as there was now a demand for large, Germanic organs with more assertive voicing. Sizable organ-building companies, with the capability of producing large instruments, became more powerful with more contracts.⁷¹

The arrival of the Boston Music Hall Organ in 1863 was undoubtedly seen as competition by Boston area organ builders. E & G.G. Hook responded by designing several large instruments, the first of which was the 1863 forty-six stop, three-manual organ for Immaculate Conception Church, Boston, Massachusetts.⁷² It was described in the *Boston Musical Times* as the “most complete and effective Organ ever built in America.”⁷³ The diapasons had a “grand fullness and solidity” and the Trumpets had a

⁶⁷ Owen, *The History of the Organ*, 179.

⁶⁸ Owen, *The History of the Organ*, 186.

⁶⁹ Owen, *The History of the Organ*, 187.

⁷⁰ Ochse, *The History of the Organ*, 200.

⁷¹ Williams, *The Organ*, 153.

⁷² Owen, *The History of the Organ*, 187.

⁷³ Owen, *The History of the Organ*, 187.

“crisp and even tone.”⁷⁴ In 1864, E. & G.G. Hook built an organ very similar to the instrument for Boston Music Hall, the four-manual organ for Mechanics’ Hall, Worcester, Massachusetts.⁷⁵ The Germanic influence on E. & G. G. Hook is reflected in a much later instrument which S.L. Huntington & Co. restored and enlarged, an 1889 E. & G.G. Hook & Hastings for St. Andrew’s Episcopal Church in Valparaiso, Indiana. Huntington’s website provides the following information about the instrument:

This instrument (1889) would have been built at the newly finished Weston factory, with the tonal design by Moritz Baumgarten Jr. who emigrated to this country from Germany where he was associated with the Walcker firm—famous for the large instrument installed in the Boston Music Hall in 1863. Baumgarten’s influence is evident in this instrument particularly in the string voicing which is very reminiscent of German string voicing of the mid-nineteenth century.⁷⁶

By the mid-1860s, E. & G.G. Hook’s organs had bold foundation stops which were balanced by brilliant reeds and upperwork.⁷⁷ The Hook brothers were using pneumatic levers in three-manual and larger instruments. Toward the end of the century the 8’ pitch dominated the thicker and heavier sound, and there was more contrast between soft and loud stops.⁷⁸ The manual compass was expanded to fifty-eight notes and the pedal compass was twenty-seven notes. Wind pressure was typically set at three to three and a half inches, with occasional instances of solo reeds on higher pressures.⁷⁹

In 1870, William Horatio Clarke contracted E. & G.G. Hook to build an organ for The First Unitarian Church, Woburn, Massachusetts. His influence led E. & G.G. Hook to move toward a more orchestral instrument. Clarke requested that the chorus reeds be

⁷⁴ Owen, *The History of the Organ*, 187.

⁷⁵ Ochse, *The History of the Organ*, 225.

⁷⁶ S.L.Huntington & Co. www.slhorgans.com (accessed August 24, 2013).

⁷⁷ Owen, *The History of the Organ*, 191.

⁷⁸ Ochse, *The History of the Organ*, 209.

⁷⁹ Ochse, *The History of the Organ*, 223.

as loud as possible, the Great Viola da Gamba be “strong, crisp & incisive,” the Swell Dolce be soft, and the Viol d’Amour be very delicate.⁸⁰

Thomas Prentice Sanborn started working for E. & G.G. Hook in 1870 and likely met William Horatio Clarke while working on the Woburn organ. The Hook company continued to grow and by 1871 the Hook brothers were producing fifty-two organs a year. Frank Hastings was promoted that year and became a partner with the Hook brothers, and the company name was changed to E. & G.G. Hook & Hastings.⁸¹ After George Hook died in 1880 and Elias in 1881, the company was renamed Hook & Hastings.

While training and working with E. & G.G. Hook & Hastings, Thomas Prentice Sanborn was said to have become “noted as a fine workman.”⁸² Evidence of his talents may be seen in a new form of tremulant he patented on September 20, 1870. A copy of this patent (No. 107,549) is on file at the Organ Historical Society in Princeton, New Jersey, and reads:

To all whom it may concern:

Be it known that I, Thomas Prentiss [sic] Sanborn, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful improvement in organ-tremulant; and I do hereby declare that the following is a full, clear, and exact description of thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

This invention relates to a new and useful improvement in a device for producing the tremulous sound of the pipes of the church-organ, and consists in a cylinder and valve, with a vibrating rod, with balls, or weights thereon, and with a thumb-screw for regulating the motion of the valve, arranged to operate as hereinafter more fully described.

In the accompanying drawing –

Figure 1 represents a vertical section of my improved tremulant, taken on the line x x of fig. 2.,

⁸⁰ Owen, *The History of the Organ*, 314.

⁸¹ Ochse, *The History of the Organ*, 217.

⁸² Friesen, unpublished research.

Figure 2 is a top view.

Similar letters of reference indicate corresponding parts.

A is the cylinder, which may be made of either wood or metal.

B is the top of the cylinder, the under-side of which top is the valve-seat.

C C are openings in the top, for the escape of the air.

D is the valve, and

E is the valve-stem

F is a guide-piece for the lower end of the stem.

G is a regulating-screw, through which the valve-stem works, as seen in fig. 1.

H is a vibrating rod, supported in the pivot-piece

I on the stand J.

K K are balls or weights on the rod, which are made adjustable thereon by means of screw-threads.

The top end of the valve-stem is connected with this rod at the point L.

M is a spiral spring, which is placed in a recess in the valve, for balancing the wind pressure.

N is a spring, which bears upon the top of the regulating-screw, and presses upward on the valve-stem, and limits the motion of the valve.

The vibration of the rod H is regulated by the adjustable balls K K.

The pressure of the air upon the under-side of the valve, as it passes through the cylinder, causes the vibration and tremulous sound.

The valve is closed against the pressure of the spring M, but the reaction permits the valve to drop, the effect being not unlike that of water upon the valve of a hydraulic-ram, producing a concussion, which causes the tremulous sound of the organ-pipes.

This is a most simple and compact arrangement, sure and uniform in its action, under all circumstances, whether one or all the stops in the organ are drawn, or a full chord is played, and is entirely independent of the action of the bellows.

The adjusting arrangement is so perfect that the valve may be rendered as sensitive as may be desired

Having thus described my invention, I claim as new and desire to secure by Letters Patent – In combination with an organ-tremulant, the cylinder A, valve d, seat B, regulating-screw G, and vibrating rod H, with the adjustable balls or weights K K, when the same are arranged to operate substantially as for the purposes herein shown and described.⁸³

No known copies of this tremulant have survived to present day, and it is unclear if, and when, he used this design. On page 25, figure 1c, is a drawing of Sanborn's tremulant with his own signature.

Thomas Prentice Sanborn had the opportunity to assist with installations of both small and large instruments while he was working for E. & G.G. Hook & Hastings. The

⁸³ Sanborn, Patent No. 107,549.

firm was noted during 1870–1880 for being capable of accomplishing large installations. They set a record for the largest instrument by an American builder in 1876 with a three-manual for Holy Cross Cathedral in Boston, Massachusetts.⁸⁴ In 1877 they broke this record with a four-manual, eighty-one register instrument for the Cincinnati Music Hall.⁸⁵ They continued to produce smaller instruments as well, with their smallest being a fifty-eight note, one-rank organ.⁸⁶

A complete opus list of E. & G.G. Hook & Hastings instruments is beyond the scope and focus of this paper. Two of their organs of different sizes will be presented and compared in later chapters to instruments by Thomas Prentice Sanborn and William Horatio Clarke. The first, the 1873 Opus 724 at First Congregational, Wellfleet, Massachusetts, was a two-manual, fourteen-rank instrument.

First Congregational, Wellfleet, MA⁸⁷
1873 E. & G. G. Hook & Hastings Op. 724
(Stoplist: Tracker 5:1:1)

GREAT (58 notes)

16' Bourdon (TC)
8' Open Diapason
8' Melodia Treble
8' Melodia Bass
8' Dulciana
4' Octave
2 2/3' Twelfth
2' Fifteenth

SWELL (58 notes, enclosed)

8' Viola
8' Stopped Diapason Treble
8' Stopped Diapason Bass

⁸⁴ Ochse, *The History of the Organ*, 219.

⁸⁵ Ochse, *The History of the Organ*, 219.

⁸⁶ Ochse, *The History of the Organ*, 219.

⁸⁷ Organ Historical Society Database, "E & G.G. Hook & Hastings, Op. 724, 1873," Organ Historical Society ID 7121, accessed July 12, 2013, <http://database.organsociety.org/SingleOrganDetails.php?OrganID=7121>.

4' Harmonic Flute
 4' Violina
 8' Oboe (treble)
 8' Bassoon (bass)
 Tremolo

Pedal (27 notes)

16' Bourdon
 8' Flute (open wood)

Swell Expression Pedal
 Couplers: S-G, S-P, G-P

A brochure from 1881 by E. & G.G. Hook & Hastings includes several examples of stoplists for two-manual instruments. The First Congregational Church, Wellfleet, Massachusetts organ closely resembles Size No. 8 from this leaflet:

Size No. 8 Price \$2,000

Case – Of appropriate Style and Design, of Walnut, Oak, or Ash woods.

Height, 14 to 18 feet; width, 10 to 12 feet; depth, 7 feet or more.

Front Pipes. – Richly ornamented in gold and colors.

18 *Stops*, 595 *Pipes*, viz.: –

GREAT ORGAN. Compass C_0 to a^3 .

1. 8 ft. OPEN DIAPASON (largest pipes in front), *very full and bold*.....metal, 58 pipes.
2. 8 “ DULCIANA, *delicate*..... “ 58 “
3. 8 “ MELODIA (stopped bass), *rich and mellow*.....wood, “ 58 “
4. 4 “ OCTAVE, *full scale*.....metal, “ 58 “
5. 3 “ Twelfth, “..... “ 58 “
6. 2 “ Fifteenth, “..... “ 58 “

SWELL ORGAN. Compass C_0 to a^3 .

7. 8 ft. VIOLA (or Keraulophon), *delicate and crisp*.....metal, 46 pipes
8. 8 “ STOPPED DIAPASON BASS *clear and bright*.....wood, “ 12 “
9. 8 “ STOPPED DIAPASON *clear and bright*.....wood, “ 46 “
10. 4 “ FLUTE, (*harmonic*), *brilliant*.....metal, “ 58 “
11. 8 “ OBOE, *plaintive* “ 46 “
12. 8 “ BASSOON, *plaintive*..... “ 12 “

PEDAL ORGAN. Compass C_1 to d^0 .

13. 16ft. BOURDON, *deep and pervading*.....wood, 27 pipes

MECHANICAL REGISTERS.

14. SWELL TO GREAT COUPLER.
15. GREAT TO PEDAL COUPLER.
16. SWELL TO PEDAL COUPLER.
17. TREMOLO.
18. BELLOWS SIGNAL.

PEDAL MOVEMENTS.

1. FORTE, COMBINATION, GREAT ORGAN
2. PIANO, COMBINATION, GREAT ORGAN
3. BALANCED SWELL PEDAL⁸⁸

Several features of the Wellfleet instrument were characteristic of E. & G.G. Hook & Hastings instruments. First, this organ had a fifty-eight note manual compass and a twenty-seven note pedal compass. Second, the Swell features two divided stops: the Stopped Diapason Bass/Stopped Diapason Treble and the Oboe/Bassoon. The Stopped Diapason Bass likely served as the lowest octave for the 8' Viola. Third, the Swell division was a smaller, quieter version of the Great and included the solitary solo stop, the Oboe. All of these features (with the exception of the fifty-eight note manual compass) are directly reflected in one of Thomas Prentice Sanborn's surviving organs, the 1883 for First Church Evangelical Association, which will be analyzed in detail in Chapter Four. The 1873 E. & G. G. Hook & Hastings for First Congregational has been rebuilt twice by the Andover Organ Company, first in 1959 and then in 1996.

A second example of an E. & G.G. Hook & Hastings instrument from the time period of 1870–1874 is a larger three-manual. The 1871 Opus 571 instrument was built for the Music Hall in Providence, Rhode Island:

⁸⁸ The Hook Opus List, 173.

Music Hall⁸⁹
Providence, Rhode Island
E & G.G. Hook & Hastings
Opus 571, 1871, 3 manuals, 33 ranks

GREAT ORGAN

16' Open Diapason (58 pipes)
8' Open Diapason (58 pipes)
8' Doppel Flote (58 pipes, wood)
8' Viol de Gamba (58 pipes, tin)
4' Octave (58 pipes)
2 2/3' Twelfth (58 pipes)
2' Fifteenth (58 pipes)
Mixture IV (232 pipes)
8' Trumpet (58 pipes)

SWELL ORGAN

8' Open Diapason (58 pipes)
8' Salicional (58 pipes)
8' Stopped Diapason (58 pipes, wood)
4' Harmonic Flute (58 pipes)
4' Violin (58 pipes)
Mixture III (174 pipes)
8' Cornopean (58 pipes)
8' Oboe & Bassoon (58 pipes)
8' Vox Humana (58 pipes)
Tremulant

SOLO ORGAN

8' Geigen Principal (58 pipes)
8' Dulciana (58 pipes)
8' Melodia (58 pipes, wood)
4' Flute d' Amour (58 pipes wood & metal)
2' Piccolo (58 pipes)
8' Clarinet (58 pipes)

PEDAL ORGAN

16' Open Diapason (27 pipes, wood)
16' Bourdon (27 pipes, wood)
8' Violoncello (27 pipes, wood)
16' Trombone (27 pipes, wood)

COUPLERS

⁸⁹ Organ Historical Society Database, "E & G.G. Hook & Hastings, Opus 571, 1871," Organ Historical Society Database 15888, <http://database.organsociety.org/SingleOrganDetails.php?OrganID=15888> (accessed July 12, 2013).

Swell to Great
Solo to Great
Swell to Solo
Great to Pedal
Swell to Pedal
Solo to Pedal.

This instrument features several characteristics of larger organs built by E. & G.G. Hook & Hastings. All three manual divisions—Great, Swell, and Solo—included at least one reed stop with an 8’ Trumpet on the Great; an 8’ Cornopean, 8’ Vox Humana, and 8’ Oboe/Bassoon on the Swell; and an 8’ Clarinet on the Solo. The pedal had one reed stop at 16’ pitch, the Trombone. The Great, Swell, and Solo manuals all had three flue stops at 8’ pitch with a principal, flute, and string rank in each division. The Solo and Swell manuals were noticeably softer than the Great, and both the Great and Swell divisions had a Mixture. All of these tonal traits are reflected in the design of the 1892 T.P. Sanborn organ for Central Avenue United Methodist, which will be discussed in Chapter Five.

Thomas Prentice Sanborn clearly flourished while training and working with E. & G.G. Hook & Hastings, and his own organs reflect their approach to tonal design. The Opus 571 and Opus 724 E. & G.G. Hook & Hastings organs are two prime examples of instruments that Thomas Prentice Sanborn would have observed firsthand during his four-year apprenticeship with the company. The design of these two instruments is similar to the two extant organs known to have been built by Thomas Prentice Sanborn, the 1883 two-manual for First Church Evangelical Association and the 1892 three-manual for Central Avenue United Methodist Church. In addition, the one extant instrument by William Horatio Clarke, an 1879 two-manual for Sacred Heart of Jesus Roman Catholic Church in Shelby, Ohio, possesses important Hook similarities and is

arguably a close relative of the two surviving Sanborns. These instruments and the influence of the E. & G.G. Hook and Hastings Company on Thomas Prentice Sanborn's organ construction and design will be discussed in later chapters of this document.

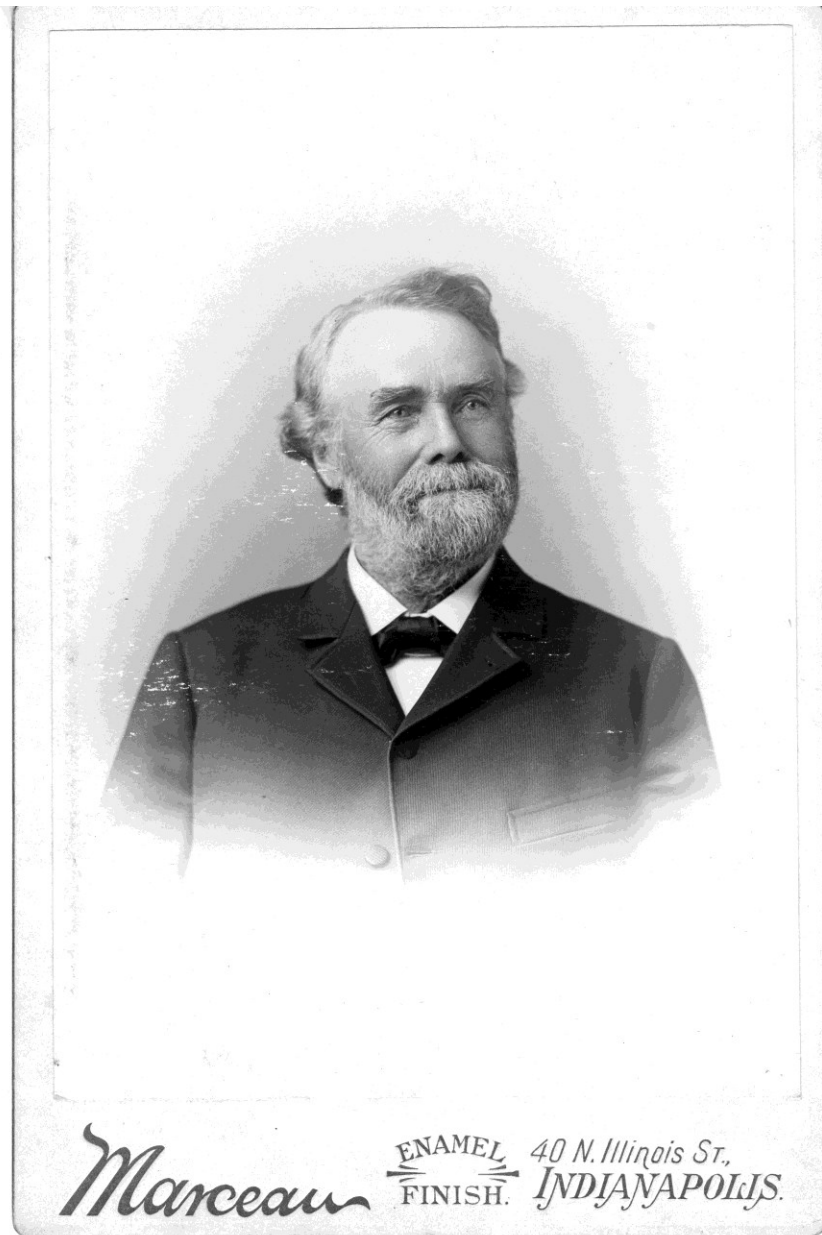


Figure 1a: Thomas Prentice Sanborn
Photography Courtesy of Stephen Pinel



Figure 1b: Amelia A. York
Photograph Courtesy of Stephen Pinel

T. P. Sanborn,
Tremolo.
No. 107,549. Patented Sept. 20. 1870.

Fig. 1

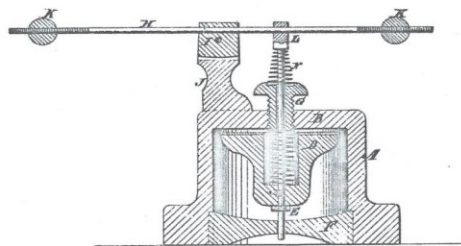
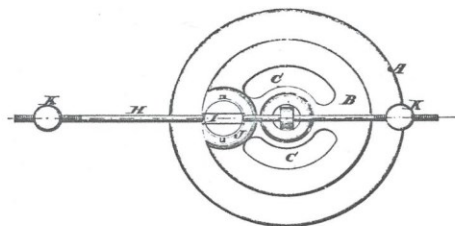


Fig. 2.



Witnesses:

E. Hoff.
L. S. McGabe

Inventor:

T. P. Sanborn
per *Mumford*
Attorneys.

W. PETER, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

Figure, 1c:
 Sanborn Tremulant, Patent No. 107,549

Chapter II. Thomas Prentice Sanborn's Career from 1874 to 1882: His Work as Shop Foreman for William Horatio Clarke's Organ-building Firm

Following his four-year apprenticeship with E. & G. G. Hook and Hastings, at the age of fifty-one, Thomas Prentice Sanborn moved to Indianapolis to work for the William H. Clarke & Kinsley firm in 1874. Clarke's company existed from 1874 to 1882 and was one of the first major organ-building firms in Indianapolis. Thomas Prentice Sanborn, now a well-trained organ builder, served as shop foreman for the company and played a key role in the construction and tonal design of Clarke's instruments.

The cash book, day book, and letter books of the William H. Clarke firm are currently located in the archives of the Indiana Historical Society in Indianapolis. The cash book commenced on March 11, 1874, presumably the date the William H. Clarke & Kinsley firm opened for business. The first entry in Clarke's cash book for Thomas Prentice Sanborn was in July of 1874. He was given a sum of twenty-four dollars twice that month as his monthly salary.⁹⁰ Sanborn started out as a company employee, and by the 1876 Indianapolis City Directory was listed as the foreman of the Wm. H. Clarke & Co.

Thomas Prentice Sanborn's son, William Marshall Sanborn, was eighteen years old when the family moved to Indianapolis and was also an organ builder for the Clarke firm. The first entry in Clarke's cash book for William Marshall was funding for travel with William H. Clarke to Chicago, Illinois, in July 1875. William Horatio Clarke wrote the following letter to William Marshall Sanborn in 1876:

⁹⁰ Clarke, *Cash Book*, 11.

Young Marshall, We hear good extorts of your behavior at the church in which we late pride (sic), showing that our influence has its effects. We are considerably anxious about the organ which will be shipped this week—so that you can have it Monday morning. Arrange so that while it is being brought to the church three of you can be unpacking it, and have one, perhaps go to the car and oversee the unloading so as to save time. You will remember that the c and c# side are reversed from the usual way..... I expect to be in Louisville, at the church of the Messiah, right after dinner on Monday next, so please arrange your own times to be there after dinner. Have the church folks get a good man for us and we will go right to work regulating, and tuning. I expect much out of that organ. We shall get through with it by Thursday noon, I hope, and then get the tuning of the other by the following Monday. Keep cool in preparation for my return. I will stir you up as little as possible.⁹¹

Carroll Glenwood Sanborn, the first of two sons of Charles Edwin (Thomas Prentice Sanborn's brother) also worked for William Horatio Clarke.⁹² The first entry for Carroll Glenwood in Clarke's cash book was February, 1876, compensation for building pedal chests. The following is a letter composed that year by the William H. Clarke & Co. and addressed to Carroll G. Sanborn. It is written in response to Carroll Sanborn's inquiry into working for the company:

Dear Sir,
Your Letter came to hand a few days since and would have been answered sooner, but we were expecting such a day to be able to send you the balance of your work. If you have a job stick to it and if we need you we will report. Please acknowledge receipt of draft. – Wm. H. Clarke & Co.⁹³

The Sanborn family moved several times while living in Indianapolis. The 1875 Indianapolis City Directory residential section lists a T.P. Sanborn residing at 71 Peru Avenue, Indianapolis, Indiana, and working as an organ builder for the W. H. Clarke & Co. In 1876, their residential address was 233 College Avenue, Indianapolis, Indiana, and in 1877, the Sanborns relocated to 363 Massachusetts Avenue, Indianapolis, Indiana. The family moved to 233 Bellefontaine, Indianapolis, Indiana, in 1878, where they continued

⁹¹ Clarke, *Letter book 1876*, 248.

⁹² Sanborn, 451.

⁹³ Clarke, *Letter book 1876*, 483

to reside until 1893, when they moved to 257 Bellefontaine. The following is a list of entries for Thomas P. Sanborn and William M. Sanborn in the Indianapolis City

Directory residential section from 1875-1882:

1875

Sanborn, Thomas P. organ builder, W. H. Clarke & Co. bds 71 Peru Avenue

1876

Sanborn, Thomas P., foreman, Wm. H. Clarke & Co., res 233 College Avenue

Sanborn, Willey, M., organ builder, res 233 College Avenue

1877

Sanborn, Thomas P., organ builder, res 363 Massachusetts Avenue

Sanborn, William M., organ builder, res 363 Massachusetts Avenue

1878

Sanborn, Thomas P., organmaker, Wm. H. Clarke & Co., res 233 Bellefontaine

Sanborn, Willey M., organ tuner, Wm. H. Clarke & Co., res 233 Bellefontaine

1879

Sanborn, Thomas P., organ builder, res 233 Bellefontaine

Sanborn, Wm M., organ builder, res 233 Bellefontaine

1880; 1881

Sanborn, Thomas P., organ builder, res 233 Bellefontaine

Sanborn, Wm. M., organ builder, res 233 Bellefontaine

Thomas Prentice, Carroll Glenwood, and William Marshall Sanborn's employer, William Horatio Clarke, was one of the most recognized names in Indiana organ-building in the 1870s and was considered one of the most prolific organ builders to work in the Indianapolis area. Clarke was born on March 8, 1840, in Newton, Massachusetts (a suburb of Boston), and was the son of Horatio and Elvira (Richards) Clarke. Clarke's ancestors were descendants of Joseph Clarke, an Englishman who immigrated to New

England in 1634. William Horatio was educated in the public high school systems of Dedham, Massachusetts.

Clarke was born into a musical family and commenced musical instrument instruction at the age of seven. He began composing at age nine.⁹⁴ In 1856, at the age of sixteen, William Horatio Clarke became the organist of the Congregational Church in Dedham, Massachusetts, and in 1859 he moved to Boston, taking a position as organist at Berkley Street Congregational Church. Clarke remained at Berkley until 1861, the same year E. & G.G. Hook and Hastings delivered their Opus 294 to the church.⁹⁵ In 1861, William Horatio Clarke moved to Woburn (a Boston suburb) where he became organist of the First Congregational Church which housed an 1860 E. & G.G. Hook and Hastings organ.⁹⁶ These instruments served as a model for Clarke's own approach to organ construction and design.

During his time in Woburn, Clarke married Eliza Richardson on December 18, 1861, and also served as a preacher.⁹⁷ William and Eliza had five sons, all of whom became musicians. In 1866, he revisited Berkeley Street Congregational in Boston for a year, and then returned to First Congregational Church in Woburn from 1867 to 1869. William Horatio Clarke became organist of First Unitarian Church of Woburn in 1869 and influenced the church's acquisition of an E. & G.G. Hook and Hastings organ, their three-manual, fifty-one register Opus 553, built in 1870.⁹⁸

⁹⁴ Friesen, "William Horatio Clarke," 3.

⁹⁵ Friesen, "William Horatio Clarke," 3.

⁹⁶ Friesen, "William Horatio Clarke," 3.

⁹⁷ Friesen, "William Horatio Clarke," 4.

⁹⁸ Friesen, "William Horatio Clarke," 4.

In 1870, Clarke became interested in organ consulting as well as music education. He served as professor of organ at Perkins Institute for the Blind in 1870, and in 1871 he left Woburn, Massachusetts, for Dayton, Ohio, where he became superintendent of musical instruction for the Dayton public school systems. While in Dayton, he developed and patented a pitch pipe and a musical tone index.⁹⁹ The following excerpt is from the February 1872 issue of *The Song Messenger*, and includes details about William Horatio Clarke's methods of musical instruction:¹⁰⁰

We have received from a correspondent in Dayton, Ohio, a very interesting account of the method of teaching, employed by the new Director in this department, Mr. William H. Clarke. The lessons are all given first to the teachers, and then by them to their pupils. Mr. Clarke visits all the rooms, one hundred in number, every week. No text books are used, but every scholar is provided with a blank music book made for the purpose (costing 20 cents), and in this are written all the songs and exercises, and all the explanations, definitions, rules, etc. In the hands of a live teacher like Mr. Clarke, we can readily see how thorough such a method might be. We shall look pleasurably for the full explanation of the system promised.¹⁰¹

It is not known if Clarke had a church job while living in Dayton, Ohio, but a record of his organ recital on April 11, 1872, was described as “the best organ recital we have had occasion to chronicle this year.”¹⁰² After only one year of residency in Dayton, Clarke left to study abroad from 1872 to 1873. It is speculated that he traveled to study organ with famous teachers, observe the latest trends in European organ-building, and further his study of organ repertoire so he could compete with the virtuosity of other rising stars. Upon his return to America, Clarke moved to Erie, Pennsylvania, where he

⁹⁹ Friesen, “William Horatio Clarke”, pg. 4.

¹⁰⁰ *The Song Messenger*, 24.

¹⁰¹ Friesen, “William Horatio Clarke”, 4.

¹⁰² Friesen, “William Horatio Clarke,” 10.

served as organist for First United Methodist Church and supervisor of contracts for Derrick & Felgemaker, an organ building firm.¹⁰³

After one year in Erie, Clarke left for Indianapolis in 1874 and formed his own organ manufacturing firm. William Horatio Clarke was one of the first organ builders in Indianapolis. Although his time there was brief, his impact on Indiana organ-building was significant.

Organ-building in Indiana was in its preliminary stages when William Horatio Clarke and Thomas Prentice Sanborn arrived in 1874. Indiana had been a state for only fifty-eight years. On July 13, 1787, the Northwest Ordinance created the Northwest Territory (Ohio, Michigan, Indiana, Illinois, Wisconsin, and part of Minnesota).¹⁰⁴ Indiana was the nineteenth state to be admitted to the union on December 11, 1816.¹⁰⁵ In the early nineteenth century, a dramatic population increase and industrial expansion on the east coast led to a movement westward by many farmers and merchants. Indiana had originally been settled by a variety of Native American tribes; settlers' earliest primary occupation was agriculture and later this included transportation and commerce.¹⁰⁶

The first center of economy in Indiana was the French city of Vincennes in 1813; this geographical center moved briefly to Corydon later that year. The state government relocated in 1821 to Indianapolis, which became the official capital of Indiana. Indianapolis was selected since it was near the state's geographic midpoint, had fertile soil, and a navigable stream, the White River.¹⁰⁷ Indiana became known as the

¹⁰³ Friesen, "William Horatio Clarke," 11.

¹⁰⁴ Friesen, "Organ Building in Indiana," 15.

¹⁰⁵ Friesen, "Organ Building in Indiana," 15.

¹⁰⁶ Friesen, "Organ Building in Indiana," 15.

¹⁰⁷ Friesen, "Organ Building in Indiana," 15.

“Crossroads of America” and Indianapolis became the site of the first Union Station in 1853.¹⁰⁸ The National Road from Cumberland, Maryland, to Vandalia, Illinois (now US 40), opened up connections to the Midwest from the East Coast.

Organ builders in Indiana constructed instruments primarily for regional churches. The first known Indiana organ builder was Joseph Prante (1818-1897). Prante moved to Indiana in 1852, then Louisville, Kentucky in 1856, and returned to Indiana to open up an organ-building shop in St. Meinrad in 1857.¹⁰⁹ St. Meinrad was a joint monastery and seminary community in southern Indiana formed in 1854. Prante’s first organ was built for the Roman Catholic Parish (St. Boniface) in Ferdinand, Indiana.¹¹⁰ He briefly returned to Louisville in 1858, and moved back to St. Meinrad from 1861–1866, and constructed several additional instruments, none of which have survived to the present day.¹¹¹

Joseph Prante’s son, August (1844–1900), was also an organ builder. He started out working in Louisville, and moved to St. Meinrad in 1874 building organs for Catholic parishes in southern Indiana and western Kentucky. Several of his instruments survive, although none were constructed in Indiana, and all at some point have been rescued. His 1889 organ for St. Joseph’s Roman Catholic Church in Owensboro is now in a private residence in Bowling Green, Kentucky.¹¹² August’s 1892 organ for St. Michael’s Roman Catholic Church in Madison, Indiana, was purchased by Historic Madison Incorporated for use as a community center organ.¹¹³ In 1899, Prante’s instrument for St. Philip Neri

¹⁰⁸ Friesen, “Organ Building in Indiana,” 15.

¹⁰⁹ Friesen, “Organ Building in Indiana,” 16.

¹¹⁰ Friesen, “Organ Building in Indiana,” 16.

¹¹¹ Friesen, “Organ Building in Indiana,” 15.

¹¹² Friesen, “Organ Building in Indiana,” 17.

¹¹³ Friesen, “Organ Building in Indiana,” 17.

Roman Catholic Church, Louisville, Kentucky, was moved to Assumption of the Blessed Virgin Mary Roman Catholic Church, Indianapolis, Indiana.¹¹⁴ After Assumption Parish closed in 1995, the organ was relocated in 1999 to Western Yearly Meetinghouse of Religious Society of Friends in Plainfield, Indiana.¹¹⁵

Another Indiana organ builder prior to Clarke in Indiana was Adam Schirle (1814–1862) of Evansville. Schirle was originally a cabinetmaker who moved to the United States around 1849 from Bavaria.¹¹⁶ James Ulbricht, also an organ builder, worked in Tell City and Troy, Indiana, around 1861. Originally from Breslau, Prussia, he started out as a painter in Iowa and moved to Indiana in 1861 to build organs.¹¹⁷

Edmund Giesecke (1845-1928) was a German American who settled in Evansville in 1872. He had been a member of the Giesecke pipe organ supply firm of Göttingen, Germany, founded by Carl Giesecke in 1844.¹¹⁸ He migrated to the United States in 1869 to help Friedrich Gerhardt of Merseburg, Germany, install a two-manual instrument for Immanuel Evangelical Lutheran Church, St. Louis, Missouri.¹¹⁹ After moving to Evansville, he partnered with Robert Mueller and later Charles Roth. He returned to St. Louis in 1884 to work with George Kilgen. Five examples of his instruments are extant: the 1898 in St. Boniface RC Church, Fulda, Indiana; the 1900 for Holy Guardian Angels RC Church, Cedar Grove, Indiana; the 1907 for St. Francis Xavier RC Church, Poseyville, Indiana; an 1880s or 1890s instrument for an unknown Evansville church, now in Austinville Christian Reformed Church, Austinville, Iowa; and

¹¹⁴ Friesen, "Organ Building in Indiana," 17.

¹¹⁵ Friesen, "Organ Building in Indiana," 16.

¹¹⁶ Friesen, "Organ Building in Indiana," 17.

¹¹⁷ Friesen, "Organ Building in Indiana," 17–19.

¹¹⁸ Friesen, "Organ Building in Indiana," 19.

¹¹⁹ Friesen, "Organ Building in Indiana," 20.

an 1872 organ for St. John's Lutheran Church, Maribel, Wisconsin, now in St. Timothy's Lutheran Church, Maumee, Ohio.¹²⁰

Louis Van Dinter (1851–1932) grew up in a family with a long tradition of organ-building and immigrated to the United States in 1870.¹²¹ He worked for ten years in Detroit and relocated to Mishawaka, Indiana, in 1884. He was originally a partner with August J. Erb (1838–1919) under the firm name Erb & Van Dinter Organ and Altar Factory, but soon was working as a builder on his own.¹²² He was a prominent builder in the region, building approximately one hundred fifty organs total for the states of Indiana, Michigan, Illinois, Wisconsin, and Kentucky.¹²³ The following are known extant instruments by Van Dinter: the 1889 instrument for St. Mary's RC Church, Louisville, Kentucky; the 1893 for St. Charles Borromeo RC Church, Peru, Indiana; the 1894 for SS. Peter & Paul RC Church, Huntington, Indiana; the 1909 instrument for Holy Trinity RC Church, Chicago, Illinois,¹²⁴ and a c. 1925 organ for St. Mary's College in South Bend, Indiana.

Indianapolis was populated earlier than Chicago, but its organ-building business did not flourish as quickly. The first pipe organ arrived in 1863, and only three other organ builders and organ technicians are known to have worked in Indianapolis prior to 1874. The first was Erastus Caswell, who moved to Indianapolis in the early 1870s to maintain pipe organs. The Western Musical Review lists the following about Mr. Caswell in its July 1870 issue:

¹²⁰ Friesen, "Organ Building in Indiana," 20.

¹²¹ Friesen, "Organ Building in Indiana," 23.

¹²² Friesen, "Organ Building in Indiana," 23.

¹²³ Friesen, "Organ Building in Indiana," 23–24.

¹²⁴ Friesen, "Organ Building in Indiana," 23.

Organ Tuning

A LONG FELT (sic) NEED SUPPLIED – Frequent application from the churches of our city and others in the State, for a competent tuner and repairer of pipe organs, has induced us to secure the valuable services of Mr. E. CASWELL, former tuner and regulator in one of the largest factories in the East. The number of organs in this city and vicinity will guarantee one good man work the year round, and as it would be much better and cheaper to secure the services of a local man (who could look after them any time), we hope to be able to engage the different organs for him.¹²⁵

The second organ builder in Indianapolis was Joseph S. Drake. He was involved in the pipe organ trade in Indianapolis beginning in 1873 and designed and built an organ with Mr. Caswell in 1873.¹²⁶ By the year 1876, Drake was living in Chicago as a musician and organ tuner.

The third Indianapolis organ builder, William Schuelke (1850-1902), was one of the most famous and prolific organ builders ever to have worked in the state of Indiana. He was born in West Prussia, trained as an organ builder in Germany, and worked in his native country before moving to the United States in 1868.¹²⁷ Schuelke had moved to Indianapolis, Indiana by 1874, opening up a shop at 141 East Washington Street. He lived in Indianapolis for only about a year before abruptly relocating to Milwaukee, Wisconsin. In addition to building organs, he also tuned and maintained instruments in the Indianapolis area.

William Horatio Clarke was the fourth organ builder to arrive in Indianapolis, and was considered one of the most successful late nineteenth-century organ builders in Indiana. Clarke's company started out as Clarke, Kinsley & Co. in 1874, and was located at the terminus of Massachusetts Avenue. William Horatio Clarke persuaded both

¹²⁵ Friesen, "Organ Building in Indiana," 28.

¹²⁶ Friesen, "Organ Building in Indiana," 29.

¹²⁷ Friesen, "Organ Building in Indiana," 20.

Stephen P. Kinsley (1826–95), a voicer for E. & G.G. Hook & Hastings, and Thomas Prentice Sanborn, an employee of E. & G.G. Hook & Hastings, to join his company. Kinsley was recruited by reason of his status and reputation as an organ builder; Sanborn was hired to deal with the internal mechanics of the instruments. Clarke presumably brought additional chestmakers, action mechanics, cabinet makers, and others from the east to construct organs. There is no record that anyone from Derrick & Felgemaker relocated to Indianapolis to work with Clarke, but it is a strong possibility given Clarke's prior brief stint in Erie, Pennsylvania, as well as the relative proximity of the two cities.

The Clarke, Kinsley, & Company's first contract was for Fourth Presbyterian Church of Indianapolis. Although the stoplist was lost, William Horatio Clarke's recital for the instrument's inauguration was printed in *Benham's* September 1874 issue (p. 180):

Mr. Clarke will give an interesting organ recital on the occasion of the exhibition of the new organ just erected in the Fourth Presbyterian Church in this city, which will occur during the early part of the month, which we shall take pleasure in recording in our next number. The following is the programme:

1. Organ Sonata No. 4—Mendelssohn
2. Selections from the Messiah—Handel
3. Transcription from Jephtha—"Waft Her Angels"—Handel
4. Fugue in G minor—Bach
5. Fughetta for 4 hands—Korner
6. Fantasia, exhibiting stops
7. Offertoire in C
8. Overture.
9. Idyl, introducing storm scene.
10. Postludium in E flat—Lefébure Wély¹²⁸

¹²⁸ Friesen, "William Horatio Clarke", 17–18.

The second contract signed by the firm was for the First Presbyterian Church of Dayton, Ohio.¹²⁹ Clarke had worked in Dayton for a year and evidently made connections to build an organ there. This instrument had a short lifespan at First Presbyterian, as the church was destroyed by a fire in 1876. A stoplist of the instrument was provided for the 1874 issue of *Benham's Musical Journal*.

First Presbyterian Church¹³⁰
Dayton, Ohio

GREAT MANUALE

16ft. Lieblich Bourdon (61 pipes)
8 ft. Open Diapason (61 pipes)
8 ft. Viola da Gamba (61 pipes)
8 ft. Dulciana (61 pipes)
8 ft. Melodia (61 pipes)
6 ft. Gemshorn Quint (61 pipes)
4 ft. Octave (61 pipes)
4 ft. Flute d'Amour (61 pipes)
3 ft. Octave Quint (61 pipes)
2 ft. Super Octave (61 pipes)
3 rank, Clear Mixture (183 pipes)
8 ft. Cornopaeen (61 pipes)

SWELL MANUALE

8 ft. Viola Diapason (61 pipes)
8 ft. Salicional (61 pipes)
8 ft. Gedeckt (61 pipes)
4 ft. Violin (61 pipes)
4 ft. Flute Harmonique (61 pipes)
2 ft. Flageolet (61 pipes)
8 ft. Oboe (61 pipes)
8 ft. Bassoon (lowest octave of Oboe)

PEDALE

16 ft. Open Diapason (27 pipes)
16 ft. Bourdon (27 pipes)
8 ft. Violoncello (27 pipes)

MECHANICAL

¹²⁹ Friesen, "William Horatio Clarke," 20.

¹³⁰ Friesen, "William Horatio Clarke," 22–23.

Great to Pedale
Swell to Pedale
Swell to Great
Pedale at Octaves
Swell Tremolo
Bellows Signal
Pedal Check

PEDAL MECHANISM

Great Forte Composition.
Great Piano Composition.
Reversible Pedal coupling Great to Pedale.
Adjustable Swell Pedal.

These two instruments were the only two built under the name Clarke, Kinsley, and Co., since Stephen P. Kinsley had left the firm by November of 1874. Kinsley may have returned to Boston to work for E. & G.G. Hook and Hastings. He is also recorded as an employee in the letter books for the Pierce Organ Company in Reading, Massachusetts.¹³¹ The following excerpt from *Benham's Musical Journal* from November 1874, suggests Kinsley left simply because he missed Boston, Massachusetts:

Our old friend S. P. Kinsley has severed his connection with the firm of Clarke, Kinsley & Co., and returned to his first love, Boston. We regret this change exceedingly, both for personal and musical reasons, the latter because he has no rival as an organ pipemaker, and we dislike parting with so excellent a workman. We trust he will allow us to hear from him from time to time, and tender him our renewed assurance of esteem.¹³²

A second source, however, suggests Kinsley and Clarke may have had a confrontation which resulted in Kinsley leaving to return to Boston after only a few months. An excerpt from a letter from the Organ Historical Society Archives written on September 8, 1956, to Barbara Owen from F. R. Webber portrays Clarke as an uncongenial colleague:

¹³¹ Pinel, "The Letter books," 1.

¹³² Friesen, "William Horatio Clarke," 22.

W.H. Clarke, or Horatio Clarke (1840–1913) was a queer fellow. He was a concert organist of the Thunderstorm-with-sound-effects kind, and he ran around with a clerical waistcoat and considered himself a clergyman. He was subject to delusions, one of which was that his father had been a noted cathedral organist in England. WHC organized an organ firm in Indianapolis, but insisted that his partners robbed him. He published a whole flock of manuals for the melodeon, and used the profits to pay his creditors after the failure of the organ factory. He had a home in Reading, which he called Clairgold Manse, and in it an unfinished 4–100 of his own build. Another of his delusions was that a relative overseas had left him a fortune. He got together a small congregation somewhat of the Unitarian kind and preached to them for a time.

After Kinsley's departure, the company was renamed the William H. Clarke & Company. William Horatio Clarke had most of his experience in accounting, with very little practical experience with organ-building. He traveled often to perform recitals and was only in Indianapolis for four out of the eight years his factory was constructing organs. Clarke certainly depended on Thomas Prentice Sanborn, his shop foreman, for leadership and expertise for the organ-building business. In fact, William Horatio Clarke patented a form of organ action in 1878, but it is believed that Sanborn or another employee of Clarke's shop was the actual inventor.

The first contract under the name William H. Clarke & Company was for First Baptist Church of Indianapolis. Stephen P. Kinsley provided assistance with the construction of the instrument until the time of his departure, but the organ was officially completed after he had left the company. The following is a description of the organ provided in the August 1874 issue of *Benham's Musical Journal*:

A LARGE ORGAN

The trustees of the First Baptist Church of this city have, with commendable musical enterprise, contracted with Messrs. Clarke, Kinsley, & Co., for a very complete instrument, to be finished in November. It will be the largest organ in this section of the country. The height of the entire instrument will be thirty-three feet. The organist will be located on the main floor of the audience room in front of the pulpit, and the Baptistry will be arched over by the organ case, which will

be twelve feet from the pulpit platform to the belt supporting the front pipes. The action work passes diagonally from the keyboards on each side of the pulpit, communicating to sixty-one small bellows, called the Pneumatic Action, by which the different sets of keys are manipulated when coupled together with as much ease as the piano forte. There will be two sets of large bellows operated by an hydraulic engine placed in the cellar. The instrument will have three manuals, a pedale of 30 keys, 52 draw stops, each set of pipes being complete through the compass of 61 manual keys, and 2,193 pipes. The draw stops are distributed as follows:

GREAT MANUALE¹³³

16 ft. Full Bourdon (61 pipes)
 8 ft. Open Diapason (61 pipes)
 8 ft. Viola da Gamba (61 pipes)
 8 ft. Doppel Flote (61 pipes)
 6 ft. Quinte Flote (61 pipes)
 4 ft. Octave (61 pipes)
 4 ft. Wald Flute (61 pipes)
 3 ft. Nasard (61 pipes)
 2 ft. Doublette (61 pipes)
 3 rank, Clear Mixture (183 pipes)
 8 ft. Cornopaeon (61 pipes)

SWELL MANUALE

16 ft. Bourdon Bass (Lowest Octave of the Lieblich Bourdon Treble)
 16 ft. Lieblich Bourdon Treble (61 pipes total)
 8 ft. Open Diapason (61 pipes)
 8 ft. Salicional (61 pipes)
 8 ft. Aeoline (61 pipes)
 8 ft. Flauto Amabile (61 pipes total)
 8 ft. St. Diapason Bass (Lowest octave of Flauto Amabile)
 4 ft. Violin (61 pipes)
 4 ft. Flute Harmonique (61 pipes)
 2 ft. Flageolet (61 pipes)
 2 rank, Echo Cornet (122 pipes)
 8 ft. Oboe (61 pipes)
 8 ft. Bassoon (lowest octave of Oboe)
 8 ft. Vox Humana (61 pipes)

CHOIR MANUALE

8 ft. Geigen Principal (61 pipes)
 8 ft. Dulciana (61 pipes)
 8 ft. Melodia (61 pipes)
 8 ft. Gedeckt (61 pipes)
 4 ft. Flute D'Amour (61 pipes)

¹³³ Friesen, "William Horatio Clarke," 22-23.

4 ft. Fugaro (61 pipes)
2 ft. Piccolo (61 pipes)
8 ft. Clarionet (61 pipes)

PEDALE CLAVIER

16 ft. Open Diapason (30 pipes)
16 ft. Bourdon Sub Bass (30 pipes)
10 2/3 ft. Stopped Quint (30 pipes)
8 ft. Flote (30 pipes)
8 ft. Violoncello (30 pipes)
4 ft. Super Octave (30 pipes)

MECHANICAL

Great to Pedale
Swell to Pedale
Choir to Pedale
Swell to Great
Choir to Great
Choir to Great Sub Octave
Swell to Choir
Choir Tremolo
Swell Tremolo
Pedals at Octaves
Great to Pneumatic Lever
Pedal Check
Hydraulic Engine

PEDAL MOVEMENTS

Great Forte Pedal Composition
Great Piano Pedal Composition
Pedal Forte Pedal Composition
Pedal Piano Pedal Composition
Reversible Coupler Great to Pedal
Adjustable Swell to Pedal

The instrument at First Baptist Church, Indianapolis, was dedicated on Tuesday, January 12, 1875. Mr. George W. Morgan gave a concert on the organ on Thursday, April 1, 1875.¹³⁴ Michael Friesen points out several interesting aspects of the stop list. For this instrument, the William H. Clarke & Company used French, German, and American nomenclature, a common characteristic of E. & G.G. Hook and Hastings

¹³⁴ Friesen, "William Horatio Clarke," 24.

instruments and many American organs in the late nineteenth century.¹³⁵ The organ included a 5 1/3' stop on the Great, similar to the stop used for the organ at Fourth Presbyterian Church, Dayton, Ohio. Other noteworthy features included a Cornopean instead of a Trumpet on the Great, a pair of 16' manual stops on the Great and Swell divisions, a 10 2/3' stop in the Pedal, and a Choir to Great 16' coupler, all of which would have added gravity to the ensemble.

While Thomas Prentice Sanborn was shop foreman, the Wm. H. Clarke & Company also built a massive organ for Roberts Park United Methodist Church, Indianapolis, at North Delaware and East Vermont Streets. Roberts Park was formed in 1842 and is the second-oldest Methodist Church in Indianapolis. Interestingly, this church was linked to the formation of Central United Methodist Church, which housed the 1892 Sanborn (to be discussed in Chapter 5). In 1854, a mission of Robert's Park United Methodist Church formed Seventh Methodist Episcopal Church, which later became Trinity Methodist Episcopal Church. This church merged with Massachusetts Avenue Methodist Episcopal Church to form Central Avenue Methodist Episcopal Church.

Construction of a new building at Roberts Park United Methodist began in 1870 and the new church was dedicated on August 27, 1876. The church had used a reed organ for worship until a local dentist, Dr. William L. Heiskell, organized a choir and started a music committee with the goal of installing a new organ.¹³⁶ William H. Clarke & Company was selected and the new organ was installed in May, 1876 at a cost of

¹³⁵ Friesen, "William Horatio Clarke," 24.

¹³⁶ Schnurr, "Roberts Park," 160.

\$10,500.¹³⁷ It was twenty-three feet wide by fifteen feet deep and enclosed by a black walnut case displaying silver-colored pipes. The organ had 2,606 speaking pipes and was considered to be the largest in the west outside of Chicago.¹³⁸ On June 12, 1876, Clarke played the organ as well as conducted the choir for the dedication service.¹³⁹ This organ was three manuals and forty-eight ranks and had the following specification:

Wm. H. Clarke & Co. 1876¹⁴⁰

3 manuals, 48 ranks

GREAT CLAVIER (Manual II)

16' Tenoroon Montre (61 pipes)
 8' Open Diapason (61 pipes)
 8' Viola da Gamba (61 pipes)
 8' Doppel Flute (61 pipes)
 5 1/3 Dominante [*sic*] (61 pipes)
 4' Octave (61 pipes)
 4' Concert Flute (61 pipes)
 2 2/3' Nazard (61 pipes)
 2' Doblette [*sic*] (61 pipes)
 III Harmonic Mixture (183 pipes)
 III Acuta Mixture (183 pipes)
 8' Trombaphone (61 pipes)

CHOIR CLAVIER (Manual I)

8' Geigen Principal (61 pipes)
 8' Stopped Diapason Bass
 8' Melodia (61 pipes total)
 8' Dulciana (61 pipes)
 4' Celestina (61 pipes)
 4' Flute D'Amour (61 pipes)
 2' Piccolo (61 pipes)
 8' Bassoon (bass for Clarinet, 12 pipes)
 8' Clarinet (49 pipes)
 8' Vox Humana (61 pipes)
 Choir Tremolo

SWELL CLAVIER (Manual III, enclosed)

16' Bourdon Bass & Treble (61 pipes total)

¹³⁷ Schnurr, "Roberts Park," 160.

¹³⁸ Smith, "Roberts Park," 6.

¹³⁹ Schnurr, "Roberts Park," 160.

¹⁴⁰ Schnurr, "Roberts Park," 161.

8' Open Diapason (61 pipes)
 8' Salicional (61 pipes)
 8' Gedeckt Bass & Treble (61 pipes)
 4' Principal (61 pipes)
 4' Violin (61 pipes)
 4' Flute Harmonique (61 pipes)
 2 2/3 Gemshorn Quint (61 pipes)
 2' Flageolet (61 pipes)
 1 3/5 Tierce (61 pipes)
 II Echo Cornet (122 pipes)
 16' Oboe (49 pipes)
 8' Trumpet Bass
 8' Trumpet Treble (61 pipes total)
 Swell Tremolo

PEDAL CLAVIER

16' Open Diapason (30 pipes)
 16' Dolcian [*sic*] (30 pipes)
 10 2/3 Stopped Quintotophone [*sic*] (30 pipes)
 8' Unison Bass (30 pipes)
 8' Violoncello (30 pipes)
 5 1/3' Octave Quint (30 pipes)
 4' Super Octave (30 pipes)
 4' Flauto (30 pipes)
 2' Clarina [*sic*] (30 pipes)
 16' Trombone (30 pipes)

COUPLERS

Great to Pedale
 Swell to Pedale
 Choir to Pedale
 Swell to Great
 Choir to Great
 Swell to Choir
 Pedale Separation

ACCESSORIES

Six Combination Pedals

Pedale Piano
 Pedale Forte
 Swell Piano
 Swell Forte
 Chorus Forte
 Chorus Piano

Great to Pedal Reversible

Swell expression shoe
Vox Humana expression shoe
Pedale Check
Motor Major (gas engine)
Motor Minor (bellows signal)

The manual compass was 61 notes and the pedal compass was 30. An interesting aspect of the Roberts Park organ is Clarke's use of a variety of mutations with two quints on the Great, two quints in the Pedal, and a pair of cornets on the Swell, one *composé* and the other a II rank (likely softer than the *composé*). William Horatio Clarke used a review of the organ by the pastor, board of trustees, and organ committee from Robert's Park

United Methodist in many of his advertisements:

The large Organ you built for Roberts Park M. E. Church, in this city, does more than give perfect satisfaction. Its excellencies, as they are developed from Sabbath to Sabbath, are constant surprise. Its praise is on the lips of all who hear it. It is an invaluable help to the service of praise, and in leading the congregation in song. It draws many lovers of music to the sanctuary. In our opinion it has no superior, and in this judgment several competent critics, who have heard the best instruments, both in Europe and America, have agreed, and we invite those who are about to contract for Organs to examine it.

The Clarke organ at Roberts Park United Methodist was replaced with Ernest M. Skinner's opus 234 in 1915. Skinner retained the Clarke façade and the remaining pipework became property of his company.

After four years in Indianapolis, one of the longest stretches of his career residing in the same location, William Horatio Clarke moved back to Boston in 1878 to become the organist at Tremont Temple in 1878. Tremont Temple had originally housed the first organ built in Boston, Hook & Hastings Opus 64 (1845), which was referenced in Chapter One. The building burned in 1852 and a new and larger instrument was built by

Hook & Hastings in 1853, Opus 149, a four-manual, seventy-nine-register instrument.¹⁴¹ This was the organ Clarke played in 1878, just before it was destroyed by another fire in 1879.

Clark then spent a year (1879–1880) organizing musical conventions and serving as a substitute organist. In June of 1880 he moved to Toronto, Canada, where he was appointed organist/choirmaster at Jarvis Street Baptist Church and a Professor of Music at a Toronto college. At Jarvis Street Baptist, he played a large three-manual instrument built by his own company in 1875. Clarke's cash book records that he traveled to Toronto in February of 1875 to construct this instrument. Thomas Prentice Sanborn ventured at least twice to Toronto to assist with the final construction and maintenance of the organ, in March of 1876 and in December of 1876.¹⁴² William Marshall Sanborn also journeyed to Toronto in December of 1875. Clarke stayed in Toronto until 1884 and was appointed sole judge of musical instruments at the Toronto Industrial Exhibition.

In 1884, he returned to Indianapolis and became a music teacher and organist of Plymouth Congregational Church (by then his organ factory was no longer in existence).¹⁴³ Clarke moved to Rochester, New York in 1886, where he was appointed organist (again) at the First Baptist Church and later returned to Boston in 1888 to become music teacher and organist at First Congregational Church in Woburn. By the mid-1880s he was stricken with a progressive arthritic condition, and he lost the use of his fingers by 1890. He retired from First Congregational in 1890 and suffered a stroke in

¹⁴¹ Friesen, "William Horatio Clarke," 12.

¹⁴² Clarke, *Cash book*, 41, 83, 109.

¹⁴³ Friesen, "William Horatio Clarke," 13.

1892.¹⁴⁴ After his stroke, he was an organ consultant, composer and editor, and a member of Society of Arts of the Massachusetts Institute of Technology. Clarke died in Reading, Massachusetts, of nephritis in December of 1913, at the age of 73.

It is believed that George Ellis, Clarke's bookkeeper, ran the business in his absence from 1878–1882. In fact, the William H. Clarke & Co. was listed as George R. Ellis, Church Organ Manufacturer in the 1881–1882 Indianapolis City Directories. According to a short biography on George Ellis by Michael Friesen, George Ramey Ellis was born in 1844, presumably in Ohio. He married Georgianna Raymond (b. December 4, 1846, d. unknown) on May 15, 1867, at her home in Dayton.¹⁴⁵ Ellis served as a member of the Fifty-Ninth Ohio Regiment in the Civil War and was a member of the Grand Army of the Republic Association.¹⁴⁶ He became a resident of Indianapolis in 1870 and originally manufactured boxes.

By 1873, George Ellis was a bookkeeper at a lock manufacturing firm, the George F. Addams & Company, at the terminus of Massachusetts Avenue. This was where William Horatio Clarke set up his organ-building workshop, and was likely how Ellis met Clarke. George Ellis worked for the George F. Adams & Company until 1874 and then became a bookkeeper for Clarke in 1875.¹⁴⁷ He remained with the Clarke firm until it either closed in 1882, or was bought out by Thomas Prentice Sanborn (the records are unclear). Ellis became a clerk in 1883 and then a cabinet-maker from 1884 until 1885, working for Daniel E. Stone, a fancy cabinet manufacturer. Ellis became part owner of

¹⁴⁴ Friesen, "William Horatio Clarke," 14.

¹⁴⁵ Friesen, "Ellis," 1.

¹⁴⁶ Friesen, "Ellis," 1.

¹⁴⁷ Friesen, "Ellis," 1.

the Enterprise Foundry and Fence Company in 1889, and in 1892 he became a partner with William Helfenberger (Ellis & Helfenberger).¹⁴⁸

Ellis was a member of Robert's Park United Methodist Church, which housed the Clarke organ discussed earlier in this chapter. According to his obituary, he had two daughters, Marjorie (b. March 6, 1874, d. unknown) and Bertha Raymond (b. August 11, 1880, d. unknown) who were both unmarried when he died. Bertha donated the ledgers of the Clarke/Ellis organ-building company to the Indiana Historical Society in November of 1952.¹⁴⁹

George Ellis had very little practical organ-building training and experience. During Clarke's absence from 1878–1882, Thomas Prentice Sanborn, with the assistance of his son William Marshall and nephew Carroll Sanborn, assumed primary responsibility for the design of the instruments. Evidence of this is found in Clarke's cash book and day book. In March 1879, Thomas Sanborn traveled for thirteen days to Louisville, Kentucky, to spend twenty-eight hours on the organ at Church of the Messiah.¹⁵⁰ T. P. Sanborn was also paid for working on the instrument at First Presbyterian Church, Hamilton, Ohio; the Scottish Rite Lodge, Indianapolis, Indiana; and the First Baptist Church in Shelby, Ohio.

The only surviving and tonally intact instrument by William Horatio Clarke's company is an 1879 two-manual, twelve-rank, fourteen-stop instrument located at Sacred Heart of Jesus Roman Catholic Church, Shelby (Bethlehem), Ohio (known at that time as

¹⁴⁸ Friesen, "Ellis," 1.

¹⁴⁹ Friesen, "Ellis," 1.

¹⁵⁰ Clarke, *Cash book*, 177.

Vernon Junction).¹⁵¹ It was built after Clarke had moved to take the position at Tremont Temple and is in the same town as the organ at First Baptist Church, which Thomas Prentice Sanborn serviced in 1881. The Sacred Heart organ is a most telling example of Thomas Prentice Sanborn's organ-building expertise; it is likely he helped to design, build, and voice this instrument.

The Sacred Heart of Jesus Roman Catholic Church started out as a German Catholic Parish; in 1852 a red brick church was built. Clarke's Opus 24 cost \$1,100 dollars and arrived at Sacred Heart Church by horse and wagon in December 1879. A new church was constructed in 1895 and Hy Stahl relocated the organ to the new building for \$80.82. Carl Barckhoff added a new swell shoe during this relocation. The organ was originally hand-pumped by school children. Opus 24 complemented services for Sacred Heart until 1960, at which point it had deteriorated and was no longer in working condition. An electronic instrument was purchased in 1968 to assist congregational singing.

In the 1970s, plans were made to restore the Clarke, and on May 3, 1980, a contract was drafted. The John G. Leek Organ Co. of Oberlin, Ohio, subsequently carried out a complete restoration. Funding for the project was provided by a monetary gift left by Susanna Sutter, who was a member of the first choir in 1905.¹⁵² The refurbished organ was rededicated on March 22, 1981, with Garth Peacock providing a recital for the occasion. The organ is listed by the Organ Historical Society as bearing citation number 29. The following is a stop list recorded on the Organ Historical Society webpage:

¹⁵¹ Friesen, "Organ-building in Indiana," 22.

¹⁵² Metzger, Steven, *Sacred Heart of Jesus Parish*, 66.

Sacred Heart of Jesus R. C., Shelby, Bethlehem, OH¹⁵³
1879 W. H. Clarke & Co.

GREAT, (61 Notes)

Open Diapason 8' (61 spotted metal, slotted 17 zinc basses in case)
Dulciana TC 8' (49, spotted, slotted)
St. Dia. Bass 8' (12 stopped wood)
Melodia TC 8' (49 open wood to top)
Octave 4' (61 spotted, coned 5, zinc basses)
Octave Quint* 2-2/3' (61 common metal, coned)
Super Octave* 2' (61 common metal, coned)

SWELL, (61 notes)

Bourdon TC 16' (49 stopped wood, arched mouths)
Salicional TC 8' (49 spotted, slotted)
Gedeckt TC 8' (49 stopped wood, arched mouths, 12 metal trebles)
Unison Bass 8' (12 stopped wood)
Flute Octaviant 4' (61 spotted, coned, arched mouths, 5 zinc basses)
Flageolet 2' (61 spotted, coned, conical arched mouths)

PEDAL, (27 Notes)

Sub Bass 16' (27 stopped wood)

COUPLERS

Sw. to Ped.
Gt. to Ped.
Manual Coupler

TREMELO (sic)

Bellows Signal
Pedal Check

Pedal movements

1. Forte
2. Piano
3. Gt. to Ped. Reversible

* denotes non-original stop label.

¹⁵³ Organ Historical Society Database, "William Horatio Clarke & Co., Op. 24, 1879," Organ Historical Society ID 29, <http://database.organsociety.org/SingleOrganDetails.php?OrganID=4256> (accessed July 12, 2013).

The design of this instrument is characteristic of many smaller mid-nineteenth century organs by E. & G.G. Hook & Hastings. As stated earlier, the organ was originally hand-pumped. (It now has an electric blower. A curtain valve was added to the reservoir in the late twentieth century and is located outside the organ chamber.) The key and stop actions are entirely mechanical. All of the pipework in the instrument is located inside a single swell box, with the exception of the 8' Diapason on the Great, which is part of the façade, and the 16' Sub Bass in the Pedal, located behind the Swell box. This arrangement is relatively unusual; many of the late nineteenth century organs featured the Great pipework unenclosed and the Swell pipework enclosed. The organ has two composition pedals: a Forte Pedal, which engages all of the stops on the Great; and a Piano Pedal, which disengages all of the stops of the Great except the Dulciana 8' and Stopped Diapason 8'; additionally there is a Great to Pedal reversible.

Clarke's (or Thomas Prentice Sanborn's) 1879 instrument has a sixty-one note manual compass and a twenty-seven note pedal compass, a fairly standard range in the late nineteenth century. The swell-shoe is located all the way to the right of the pedalboard, which was still common practice for some smaller instruments in the 1870s. The organ includes a short compass for some of the Swell and Great 8' ranks. The Great 8' Dulciana and 8' Melodia both terminate at tenor c, and the Swell 8' Salicional and 8' Gedeckt both have short forty-nine note compasses. Similar to 8' Open Diapason ranks on many smaller E & G.G. Hook & Hastings organs, the Clarke Great 8' Open Diapason has a full sixty-one note compass.

This organ is strikingly similar to the 1873 E. & G.G. Hook & Hastings organ for First Congregational, Wellfleet, Massachusetts, that was presented in Chapter One. The

Great division of both instruments was based on the 8' Open Diapason and included an 8' Melodia, 8' Dulciana, 4' Octave, 2 2/3, and 2'. Both instruments had a short compass for several Great and Swell stops. The Swell division of both organs had an 8' string, 4' Harmonic Flute, and Tremolo. The pedalboard of both the E. & G.G. Hook 1873 and the Clarke 1879 had a twenty-seven note compass, was flat, and controlled a 16' Bourdon. One manual 16', a Bourdon, was incorporated into the design of both instruments.

Several photographs of the Shelby, Ohio, instrument are provided at the end of this chapter. Figure 2a (on page 54) is a photograph of Sacred Heart of Jesus Catholic Church's current church building, and figure 2b (on page 55) is the 1879 Clarke in the balcony of the church. Figure 2c (page 55) is a photograph of the nameplate on the organ after the restoration in 1981; Figure 2d (page 56) is a picture of the original two-manual console, and Figure 2e (page 56) is a photo of the flat pedal board with a twenty-seven note compass. Figure 2f (page 57) is a photograph of the Swell and Great backfall beam; figure 2g (page 57) is a snapshot of the double rise reservoir; figure 2h (page 58) is a picture of the Swell roller board; figure 2i (page 59) is a picture of the original pedal trackers at the manual/pedal backfalls; and figure 2j (page 60) is a photo of the Pedal 16' Sub Bass, located at the back of the instrument.

Another instrument constructed by Thomas Prentice Sanborn and George R. Ellis after Clarke left the firm was for Market Street Presbyterian Church, Lima, Ohio. The organ is no longer extant and no stop list survived. The following is an excerpt from the Boston Organ Club Newsletter (July–August 1979) taken from *The Musical Herald*, Boston, August 1880:

Lima, Ohio—A new organ, built for the Market Street Presbyterian Church, by George R. Ellis, of Indianapolis (successor to William H. Clarke & Co.), was

exhibited June 30, by Mr. F. R. Webb, organist, who was assisted by the choir of the church. The instrument has two manuals, and their compass is from C C to C4, sixty-one keys. The compass of the pedal is from C C C to D, twenty-seven keys. The number of draw stops is twenty-three. The specification, which was prepared by Dr. William H. Clarke, contained no reed stops, the idea being to get as much variety as possible with a few stops. Hence the omission of a diapason in the swell, and the substitution of a bourdon. The dulciana is voiced the softest, the salicional (sic) being a soft gamba. At the expense of one of the church trustees, some reed-stops, oboe-bassoon, and clarinet, were added. A peculiar feature of the organ is the fact that the entire organ—great manual as well as the swell—(except the open diapason) is in the swell box. It is a very fine instrument, and unusually effective. The concert was a success, both financially and artistically.

Thomas Prentice Sanborn had the opportunity to help maintain a wide variety of instruments while working for Clarke. William H. Clarke's organ company produced at least forty organs total with numerous contracts for Indiana's largest instruments. It produced both local and regional organs with several for Indiana, Ohio, Kentucky, and Illinois, as well as for Toronto, Canada, Iowa, and Massachusetts. The eventual result of Clarke's long absence from Indianapolis was that his organ-building business eventually had no more contracts, and in 1881, the last instrument was completed. The firm either closed or was bought out by Thomas Prentice Sanborn in 1882.



Figure 2a. Sacred Heart of Jesus Roman Catholic Church, Shelby, Ohio (2013)



Figure 2b. 1879 W. H. Clarke & Co., Shelby, Ohio



Figure 2c. W.H. Clarke & Co 1879, John G. P. Leek Organ Company, 1881



Figure 2d. 1879 W. H. Clarke & Co., Console



Figure 2e. Pedalboard of the 1879 W. H. Clarke, Shelby, Ohio



Figure 2f. 1879 W. H. Clarke, Great and Swell stickers, Swell trackers, backfall beam, and square rail, Opus 24, Great bung-board



Figure 2g. 1879 W. H. Clarke, Double-rise reservoir

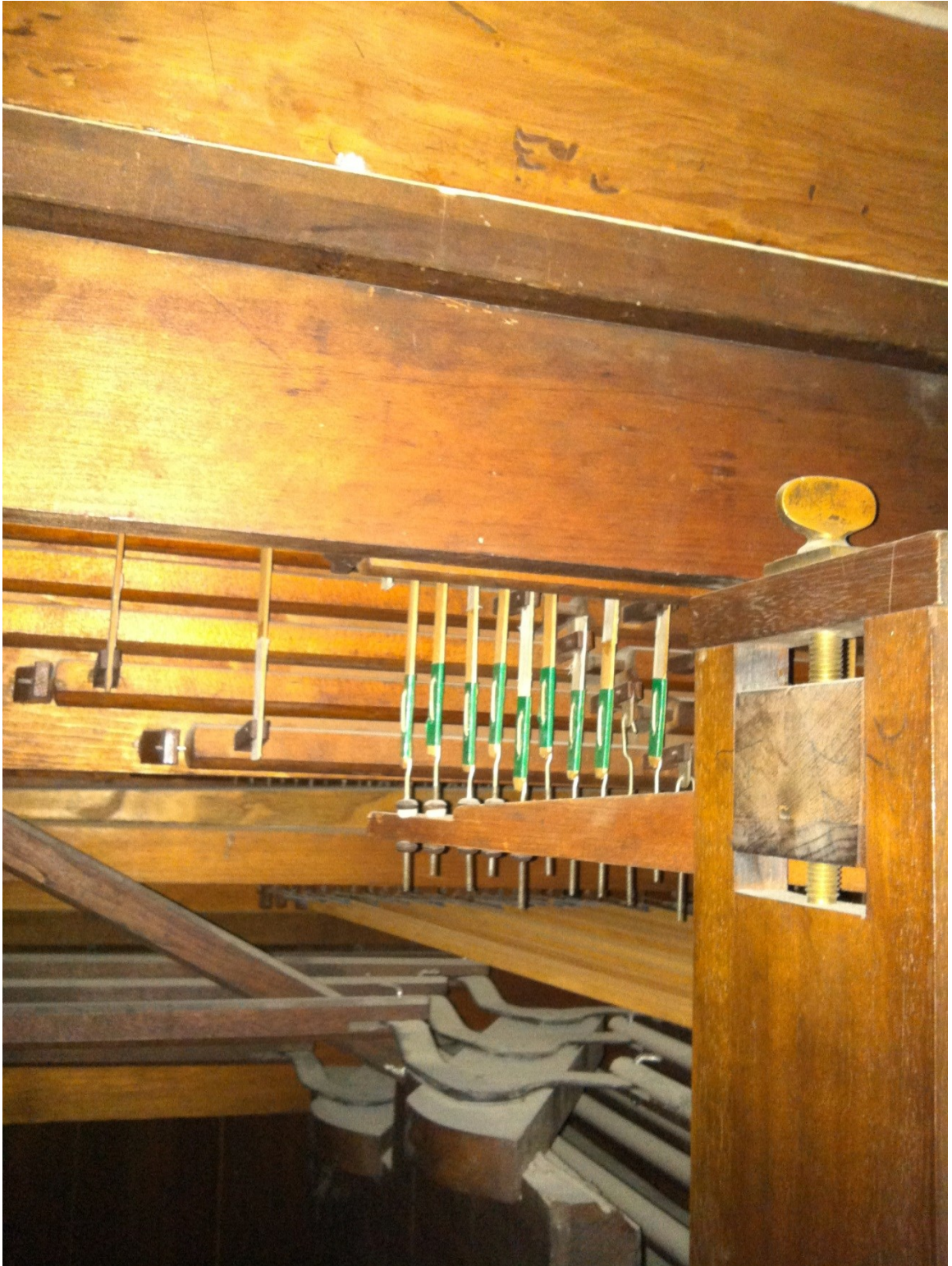


Figure 2h. 1879 W.H. Clarke, Great roller board



Figure 2i. 1879 W. H. Clarke, Original pedal trackers to Manual/Pedal coupler backfalls



Figure 2j. 16' Sub Bass, 1879 W. H. Clarke & Co.,
Sacred Heart of Jesus Roman Catholic Church, Shelby, Ohio

Chapter III. Thomas Prentice Sanborn's Career from 1882 to 1903:

T.P. Sanborn & Son

In 1882, at the age of sixty, Thomas Prentice Sanborn opened an organ-building business of his own, T.P. Sanborn & Son. This company was the fifth organ-building firm in Indianapolis, Indiana, and produced approximately thirty-five instruments for area churches. Sanborn's twelve-plus years of organ-building experience working with E. & G.G. Hook & Hastings and William Horatio Clarke aided him in establishing a business that produced superior quality instruments for nearly two decades.

Thomas Prentice Sanborn presumably purchased the business interests of the William H. Clarke Company after the company's dissolution, but Sanborn's first shop location was not at the location of Clarke's old factory (at the terminus of Massachusetts Avenue). The first entry for the T. P. Sanborn & Sons shop appears in the 1885 Indianapolis City Directory business section under the category, "organ builders," as the following: Sanborn, Thomas P. 14 ½ North East Street. The following are listings from the Indianapolis City Directories (1885-1887) for this shop location:

1885: Sanborn, Thomas P. 14 ½ N. East

1886: Sanborn, T.P. & Son, 14 ½ N. East

1887: Sanborn, T.P. 14 ½ N. East¹⁵⁴

In figures 3a (page 77), 3b (page 78), and 3c (page 79) are three images of the first location of T.P. Sanborn & Son's shop. It was on the third floor of the building and occupied the entire floor except for two small rooms. F. Schirich's Planing Mill and Picture Frame Factory was on the first floor, and the Indianapolis Lounge Company

¹⁵⁴ *Indianapolis, Indiana City Directory*, 1885–1887.

occupied the entire second floor, as well as a small section of the first floor. The map description notates that the building had lights, gas, and oil, and the first floor had a night watchman.

Figure 3d (page 80) is a picture of Thomas Prentice Sanborn's business journal advertisement from the 1884–1885 Indiana Polk's Gazetteer Business Directory. This advertisement lists Sanborn's shop at its first location, 14½ North East Street. It describes their instruments as the "best of musical and mechanical workmanship, furnished and reasonable prices" and notes that they were "organ builders with twenty years' practical experience building the largest organs." The advertisement lists Prof. Wm Horatio Clarke, C. H. Weegman, Paul Bahr, and Robert Newland from Indianapolis; Prof. G. M. Cole from Richmond, Indiana; the Rev. Dr. J. H. Castle from Toronto, Canada; and the Rt. Rev. Bishop Dudley from Louisville, Kentucky, as references. It also mentions several organs built under Sanborn's supervision: Roberts Park M.E. Church and First Baptist Church, Indianapolis; Jarvis Street Baptist Church, Toronto, Ont., Canada; as well one instrument built by T.P. Sanborn & Son for Plymouth Church, Indianapolis, Indiana. The fact that Thomas Prentice Sanborn included major instruments constructed by the Clarke factory for this advertisement reemphasizes the hypothesis that, as the foreman of William H. Clarke & Co., he had a primary role in the engineering and production of many of the instruments.

Thomas Prentice Sanborn's son, William Marshall Sanborn, worked for his father from 1882 until 1887. The 1885 Indiana Polk's Gazetteer Business Directory advertisement and the 1886 Indianapolis City Directory both list the company's first

name as T. P. Sanborn & Son. Entries in the residential section of the Indianapolis City

Directory included:

1882–1883:

Sanborn, Thomas P., organ builder, res 233 Bellefontaine

1884:

Sanborn, Thomas P., organ builder, res 233 Bellefontaine

Sanborn, Wm. N., organ builder, res 233 Bellefontaine

1885:

Sanborn, Thomas P., organ builder, res 233 Bellefontaine

Sanborn, Willie N., organ builder, res 233 Bellefontaine

1886:

Sanborn, Thomas P., organ builder, res 233 Bellefontaine

Sanborn, Willey N., organ builder, res 233 Bellefontaine

1898:

Sanborn, Thomas P., organ builder, h 1405 Bellefontaine

Sanborn, Wm M., organ builder, h 1405 Bellefontaine¹⁵⁵

For unknown reasons, William Marshall relocated five years after T. P. Sanborn & Son was established, although evidence suggests he did continue in organ-building. He left Indianapolis in 1887 and returned briefly for at least a year in 1898, likely to assist his aging father with the construction of instruments. According to Thomas Prentice Sanborn's obituary, William Marshall Sanborn was residing in New York City in 1903. By the time of the 1910 federal census, he was living in Brattleboro, Windham, Vermont, with Amelia Sanborn, who was listed as widowed.¹⁵⁶ Also listed in William Sanborn's household for this census were Chas and Lola Frink, Gerda Emanuelson, Effie Jones, Shirley Rosis, J. Hall, and Hortense Hall. Ed Boadway confirmed through e-mail correspondence in May of 2013 that several of these names appear in the *Estey Organ*

¹⁵⁵ Indianapolis, Indiana City Directory, 1882–1889.

¹⁵⁶ 1910 U. S. Census.

Archives, as employees of the company. The Brattleboro Town Directories include the following entries for William's Marshall Sanborn and Amelia Sanborn:

1911:

Sanborn, Amelia A., wid, 10 Chapin Street
Willey M., asst. supt E O Co., bds 10 Chapin Street

1913:

Sanborn Amelia A. Mrs, 10 Chapin
Willey M. Asst supt E.O. Co, bds 10 Chapin

1914:

Sanborn, Amelia A. Mrs., bds 5 Oak
Willey M. asst. sup: E O Co, bds 5 Oak¹⁵⁷

William Marshall Sanborn became the Assistant Superintendent of Estey by 1911 and was working under Superintendent William E. Haskell (1865–1927). Haskell was a highly regarded organ builder from Philadelphia, Pennsylvania, who had trained with the Roosevelt Pipe Organ Company, moving to Brattleboro in 1901 to become Superintendent of the Estey Pipe Organ Company.¹⁵⁸ According to written correspondence with John H. Carnahan on August 12, 2013, William and Amelia Sanborn's residence was next to William E. Haskell. It can therefore be inferred that Haskell knew William Sanborn well and hired him to be his assistant at Estey. William Marshall's name disappeared from the city directories for Brattleboro, Vermont, in 1916. The 1930 census lists a William Marshall Sanborn residing in the Bronx, New York.

Thomas Prentice Sanborn's nephew, Carroll Glenwood Sanborn, also worked for T.P. Sanborn & Son.¹⁵⁹ Carroll Glenwood, a cabinet-maker, was born on April 12, 1854, and married Harriet Moulton on June 9, 1877. He died September 29, 1887, at the age of

¹⁵⁷ Brattleboro Town Directories, 1911–1914.

¹⁵⁸ Pinel, Stephen, "E. & G.G. Hook," 170.

¹⁵⁹ Reynolds, 1.

twenty-three. Coincidentally, he died the same year that William Marshall Sanborn left Indianapolis.

The second location of Thomas Prentice Sanborn's shop was at 11th and Martindale Streets. Several sources list this location as the "terminus of Massachusetts Avenue," a location which, in the nineteenth century, was very close to 11th and Martindale. This was originally the location of William Horatio Clarke's organ factory and it is probable that Sanborn moved his shop into the same building where Clarke's company had been located from 1874 to 1882. Since Sanborn both stayed in Indianapolis to work with George R. Ellis when Clarke left, and later moved his shop to the original location of Clarke's shop, it can be logically inferred that he bought out the business interests of the firm (in 1882). The following is a list of entries for the second location of Thomas Prentice Sanborn's shop from the residential and business sections of the Indianapolis City Directory:

1889–1891:

Sanborn, Thomas P. Martindale Ave and Belt RR

1892–1896:

Sanborn, Thomas P. Sw Cor Martindale and 11th¹⁶⁰

The intersection of Martindale Ave and Belt RR and the corner of Martindale and 11th both describe the same geographic location in nineteenth-century Indianapolis.

Thomas Prentice Sanborn apparently did not move his household as often after relocating to 233 Bellefontaine in 1878. The following are entries in the Indianapolis City Directory's residential section for Thomas Prentice Sanborn from 1887 until 1903. It is possible they are all the same geographic location and reflect a change in street numbering in the late nineteenth century Indianapolis area:

¹⁶⁰ Indianapolis, Indiana City Directory, 1889–1896.

1887–1892:

Sanborn, Thomas P., organ builder, res 233 Bellefontaine

1893:

Sanborn, Thomas P., organs, 257 Bellefontaine

1894–1897:

Sanborn, Thomas P., 255 Bellefontaine

1898:

Sanborn, Thomas P., organ builder, h 1405 Bellefontaine

Sanborn, Wm M., organ builder, h 1405 Bellefontaine

1899–1903:

Sanborn, Thomas P., organ builder, h 1405 Bellefontaine¹⁶¹

On page 81, figure 3e, is a picture of Sanborn's second shop location. This picture is from the Harvey B. Martin photographs collection currently located at the Indiana Historical Society. Harvey Braken Martin (b. May 24, 1875) was the son of Gary Wyman Martin and Matilda A. Martin of Indianapolis. He married Attia L. Malott on June 21, 1904. Martin was an amateur photographer, and his main occupation was as an insurance agent from 1890 to 1930 when he worked for the A. Metzger Agency and Glens Falls Insurance Company. This photograph features a residential home with the Sanborn shop in the background. The sign on the shop reads, "T.P. Sanborn Pipe Organ Factory."

Thomas Prentice Sanborn's company produced approximately thirty-five instruments. No known opus list for the firm survived, if one ever existed. There are two instruments that still exist today, one built in 1883 for First Church Evangelical Association in Indianapolis and a second built in 1892 for Central United Methodist Church, Indianapolis. Both of these instruments will be analyzed in Chapters Four and Five of this document.

¹⁶¹ Indianapolis, Indiana City Directory, 1887–1903.

One of Thomas Prentice Sanborn's first instruments, and quite possibly his Opus One, was for the Scottish Rite Building in Indianapolis, Indiana, now the Scottish Rite Cathedral. The Scottish Rite Cathedral, at North Meridian Street between North and Walnut Streets, was founded in 1865.¹⁶² After several years of meeting in different locations, a committee arranged for two floors of the Baldwin Block to be rented. The rooms of this building featured an organ by Indianapolis organ builder, William Schuelke. In the 1880s a growth in membership meant a need for a larger space, and a committee was formed in 1882 to search for a new location. The trustees purchased the Townsley and Wiggins "Pork House" property at 29–35 South Pennsylvania Street.¹⁶³ A new organ by T. P. Sanborn & Son was built for this location and was "given to the Rite by a group of members who called themselves the Organ Society of the Rite. It was a fine \$2,700 pipe organ of 1,100 pipes operated by a water motor."¹⁶⁴

In 1909, the Scottish Rite Cathedral relocated again to the Grand Lodge Building at Illinois and North streets. Six identical tubular-pneumatic organs were built for the rooms of the building by A. B. Felgemaker.¹⁶⁵ The Felgemaker Organ Company was based in Erie, Pennsylvania, where William Horatio Clarke had worked (1873–1874) prior to moving to Indianapolis. Although the stoplists for both the Schuelke and Sanborn organs are no longer in existence, we have the following stoplist for the 1909 A. B. Felgemaker Opera 1002 through 1007:

GREAT ORGAN (Manual I)

8 Open Diapason (metal, 61 pipes)

8 Melodia (wood, 61 pipes)

8 Dulciana (metal, 61 pipes)

¹⁶² Schnurr, "Scottish Rite Cathedral," 203.

¹⁶³ Schnurr, "Scottish Rite Cathedral," 204.

¹⁶⁴ Schnurr, "Scottish Rite Cathedral," 205.

¹⁶⁵ Schnurr, "Scottish Rite Cathedral," 206.

4 Octave (metal, 61 pipes)

SWELL ORGAN (Manual II enclosed)

8 Stopped Diapason (wood, 61 pipes)

8 Salicional (metal, 61 pipes)

8 Aeolina (metal, 61 pipes)

4 Flute Harmonique (metal, 61 pipes)

PEDAL ORGAN

16 Bourdon (wood, 30 pipes)

COUPLERS

Great to Pedal

Swell to Pedal

Swell to Great Sub

Swell to Great

Swell to Great Octave

ACCESSORIES

Tremulant

Balanced Swell expression shoe

Bellows Signal

Wind indicator

Pedal movements

Great Forte

Great Piano

Swell Forte

Swell Piano

The building which housed Thomas Prentice Sanborn's 1882 instrument has since burned and the instrument is no longer extant. The Scottish Rite Cathedral is now home to the Skinner Organ Company's 1929, opus 696.

Joe Roberts, an Indiana organ historian, indicated via written correspondence in May 2013 that Thomas Prentice Sanborn was also the builder of the organ for Second Baptist Church, Indianapolis, Indiana. This instrument was rebuilt by the Votteler Holtkamp Sparling Organ Company of Cleveland, Ohio. During the mid-twentieth century, it bore the Votteler Holtkamp nameplate. It is not known exactly when this

instrument was built, or when it was rebuilt. Roberts noted that it featured Thomas Prentice Sanborn's signature bung board clamps (see Chapter Four) and is therefore attributed to T.P. Sanborn & Son. Unfortunately, the organ was destroyed by a fire in 1993, just one week before the Organ Clearing House was to set to remove it. The following is the stop list, courtesy of Joe Roberts:

SECOND BAPTIST CHURCH

Indianapolis, Indiana
Thomas Prentice Sanborn

GREAT (61 note compass)

Open Diapason 8'
Melodia 8'
Dulciana 8'
Octave 4'
Fifteenth 2'
Clarionette 8'

SWELL (61 note compass)

Open Diapason 8'
Unison Bass 8'
Stopped Diapason 8'
Salicional 8'
Aeolina 8'
Vox Celeste 8'
Flute Harmonic 4'
Oboe 8'

PEDAL (30 note compass)

Open 16'
Pedal Bourdon 16'
Pedal Octave 8'
Pedal Flute 8'

Swell to Great
Great to Pedal
Swell to Pedal
Swell to Great 4'

Tremolo
Chimes

The T. P. Sanborn & Son advertisement for the Indiana Polk's Gazetteer recorded that Thomas Prentice Sanborn & Son built an organ for Plymouth Congregational Church in Indianapolis, Indiana. Plymouth Congregational was the first Congregational church in Indianapolis. The church was originally located on Meridian Street just north of Monument Circle from 1859 to 1884, and then relocated to the southeast corner of New York and Meridian Streets, remaining at this location for sixteen years (1884–1900). The author of this document believes Sanborn built the instrument for the new building in 1884. In 1900, the Federal Government bought the block occupied by the church and eight years later Plymouth merged with Mayflower Congregational Church and became First Congregational Church, moving to the corner of 16th and Delaware Streets. Unfortunately, the organ no longer exists and a stop list could not be located.

Sanborn designed an instrument for his home church, Mayflower Congregational, in Indianapolis, where he was a founding member and deacon. Very little is known about this instrument other than it was his magnum opus (a large three-manual). Thad Reynolds's biography of T.P. Sanborn records that Sanborn built instruments for First Congregational Church and the Zorah Temple in Terre Haute, Indiana, as well as Memorial Presbyterian Church of Indianapolis, Indiana. Of these instruments, the organ at Memorial Presbyterian Church is the only instrument for which a stop list still exists.

The three-manual organ at Memorial Presbyterian Church was constructed sometime during the years 1887–1889 for a cost of \$3,200.¹⁶⁶ This Sanborn had tracker action, apparently with pneumatic assist. The Page Company replaced the original console with a stoptab console in the 1920s and the instrument was removed when the

¹⁶⁶ Roberts, Joe, unpublished research.

church was razed for construction of Interstate 70 in 1972. A drawing of the keydesk, archived in the Jesse G. Crane collection at the Indianapolis Public Library, is included in appendix A of this document. The stoplist was as follows:

MEMORIAL PRESBYTERIAN CHURCH

Indianapolis, Indiana
T. P. Sanborn & Son—1887–1889

GREAT (61 note compass)

16' Open Diapason
8' Open Diapason
8' Gamba
8' Doppel Flute
4' Octave
4' Flute d' Amor
2 2/3 Twelfth
2' Fifteenth
III Mixture
8' Trumpet

CHOIR (61 note compass)

8' Geigen Principal
8' Dulciana
8' Concert Flute
4' Fugara
4' Flauto Traverso
2' Piccolo Harmonic
8' Orchestral Clarinet

SWELL (61 note compass)

8' Gedeckt
8' Vox Celeste
8' Aeoline
8' Salicional
8' Quintadena
4' Wald Flute
4' Violina
2' Flautino
III Dolce Cornet
8' Vox Humana
8' Cornopaen [sic]
8' Oboe and Bassoon

Pedal (30 note compass)

16' Open Diapason
16' Violone
16' Bourdon
16' Bourdon Bass
8' Violin Diapason
8' Cello

Swell to Pedal
Swell to Great
Swell to Choir
Swell to Choir 4'
Tremolo
Great to Pedal
Great to Pneumatic
Choir to Pedal
Swell to Choir
Choir to Great 16'

Swell P
Swell M
Swell F
Choir P
Choir F
Full Organ
Great to Pedal reversible
Great F
Great M
Great P

According to unpublished research by Joe Roberts, the instrument had no nameplate or indication of the original builder. For many years, organ builders thought that the organ was a product of Prante, Odell, or Hutchings. Memorial Presbyterian Church had a tradition that the organ was built in a “shed” next to the church. Recently, it was discovered that the church was very near the second location of Thomas Prentice Sanborn’s shop at the terminus of Massachusetts Avenue. As a result, it is now believed that this organ was built by Sanborn.

Of the few existing stop lists by Sanborn, Memorial Presbyterian is the largest. The disposition of this organ is very similar to the instrument for Music Hall in Providence, Rhode Island (Opus 571 by E. & G.G. Hook & Hastings) discussed in Chapter One. The Great is nearly an exact replica with two exceptions: the organ for Music Hall had a Mixture IV while the Sanborn had a Mixture III, and the instrument for Memorial Presbyterian Church included a 4' flute. The Choir division of Sanborn's 1887–1889 was almost identical to the Solo division of the Opus 571 E. & G.G. Hook & Hastings, with the Sanborn instrument including one additional stop, the 4' Fugara. The Swell Division of both instruments featured three reed stops: a Cornopean, a divided Oboe/Bassoon, and a Vox Humana. One contrast between the Swell divisions of these two instruments was that the Swell of the Music Hall organ was based on an 8' Open Diapason while the Swell of the Sanborn organ was based on an 8' flute. The Pedal division of the E. & G.G. Hook & Hastings organ had two 16' flues, an 8' flue, and a 16' reed (Posaune), while the Pedal division of the 1887–1889 Sanborn featured four 16' flue stops and two 8' flue stops.

Several remarkable features of the Memorial Presbyterian instrument must be noted. First, this organ had both the choir and swell shoes in the middle of the pedal board (the drawings of the 1883 and 1892 instruments which will be discussed in the next chapters feature the swell shoe to the far right). Second, this instrument featured a Great to Pneumatic lever, which presumably had the same function as a "Grand Orgue sur la Machine" on Cavaillé Coll's instruments. Third, this organ had a total of ten composition pedals (most likely factory presets) which permitted the organist to swiftly change stops while playing.

In written correspondence from June 22, 2013, Joe Roberts reported that he had been impressed with the massive chests, supports, and structure of the interior of the Memorial Presbyterian organ. He also discovered stampings of “G. Mack,” a voicer for Roosevelt, on the Great 12th low C and the Swell Flautina. This suggests Sanborn may have purchased some pipework from Roosevelt. Hilborne Roosevelt (1849–1886) organized the Roosevelt Pipe Organ builders (New York City) in the 1880s with his brother Frank. They built over 500 organs from 1875–1895 and were renowned for their tonal design, becoming one of the most distinguished organ building companies in United States history. Thomas P. Sanborn also purchased pipework from Samuel Pierce of Reading, Massachusetts. This connection will be discussed in detail in Chapter Four.

Photographs taken by Joe Roberts of Memorial Presbyterian Church and the Sanborn organ are provided on page 82, figure 3f. The massive organ encasement features large wood pedal pipes at each end of the case. This was a similar arrangement to the façade of the 1892 Central Avenue Methodist organ, which will be discussed in Chapter Five.

In 1893, Sanborn built an organ for First M. E. Church in Noblesville, Indiana. This instrument had seven-hundred forty-one pipes and comprised thirteen ranks. The following article about the installation of the 1893 T. P. Sanborn was written for the *Indiana Daily Ledger* on March 24, 1893:

T. P. Sanborn, of Indianapolis, the gentleman who made the pipe organ for the new M. E. church is in the city and Thursday he showed your reporter some of its grand qualities, but unfortunately for the reporter the instrument’s capacity was too much for his limited knowledge of such things, yet he could learn something of it. Its furniture matches the finish of the building to perfection, so that the appearance is pleasing to the artists’ eye. The instrument has 741 pipes, varying in size from three-fourths of an inch to sixteen feet. Thus the compass of the instrument reaches from the pp tone of the piccolo (sic) to the thundering bass

tones of the bb tuba and all the intervening tones with every quality desirable. It is a “thing of beauty and a joy forever.” It is a credit to our city and an honor to the people whose enterprise brought it here. Tomorrow evening it will be dedicated by rendering a large program of the best music, both vocal and instrumental interspersed with organ recitals which of themselves are worth more than the price of admission. Every seat should be filled, in fact every available space should be filled with extra seats and occupied by persons willing to show their appreciation of the efforts of these zealous people to build our beloved city.¹⁶⁷

The 1893 Sanborn was substantially replaced by the M. P. Möller Pipe Organ Company in 1912. The Möller Company was originally from Greencastle, Pennsylvania, founded in 1875 by Mathias Peter Möller, a Danish organ builder. It relocated to Hagerstown, Maryland, in April 1881; it closed its doors in 1992. Möller replaced the 1893 Sanborn with a larger tubular pneumatic organ and incorporated the front pipes from the original T. P. Sanborn & Son into a much larger façade. According to Joe Roberts, the church relocated in 1969, at which point the pipes were sold and the case of the instrument was destroyed.

Thomas Prentice Sanborn continued to build organs until 1901, retiring at the age of seventy-eight. He died on March 13, 1903, in Indianapolis, six months before his eightieth birthday. His company built approximately thirty-five instruments total. Most were located in the state of Indiana with a few constructed for other churches in nearby cities and states. A partial opus list of Thomas Prentice Sanborn’s organs is as follows:

1882 Scottish Rite Temple, Indianapolis, Indiana

1883 First Church Evangelical Association, Indianapolis, Indiana*

1884 Plymouth Congregational, Indianapolis, Indiana

1887–1889 Memorial Presbyterian Church, Indianapolis, Indiana

1892 Central Avenue Methodist Church, Indianapolis, Indiana*

¹⁶⁷ *Indiana Daily Ledger*, March 24 1893, 1.

1893 First M. E. Church, Noblesville, Indiana

First Congregational Church, Terre Haute, Indiana

Mayflower Congregational Church, Indianapolis, Indiana

Second Baptist Church, Indianapolis, Indiana

Zorah Temple, Terre Haute, Indiana

*extant organ

Of these instruments, two survive to the present day, the 1883 for First Church Evangelical Association, Indianapolis, and the 1892 for Central Avenue Methodist Church, Indianapolis. The 1892 T. P. Sanborn is a rebuild and will be analyzed in Chapter 5 of this document. Chapter Four will focus on the sole surviving organ by Thomas Prentice Sanborn in near-original condition, the 1883 for First Church Evangelical Association.

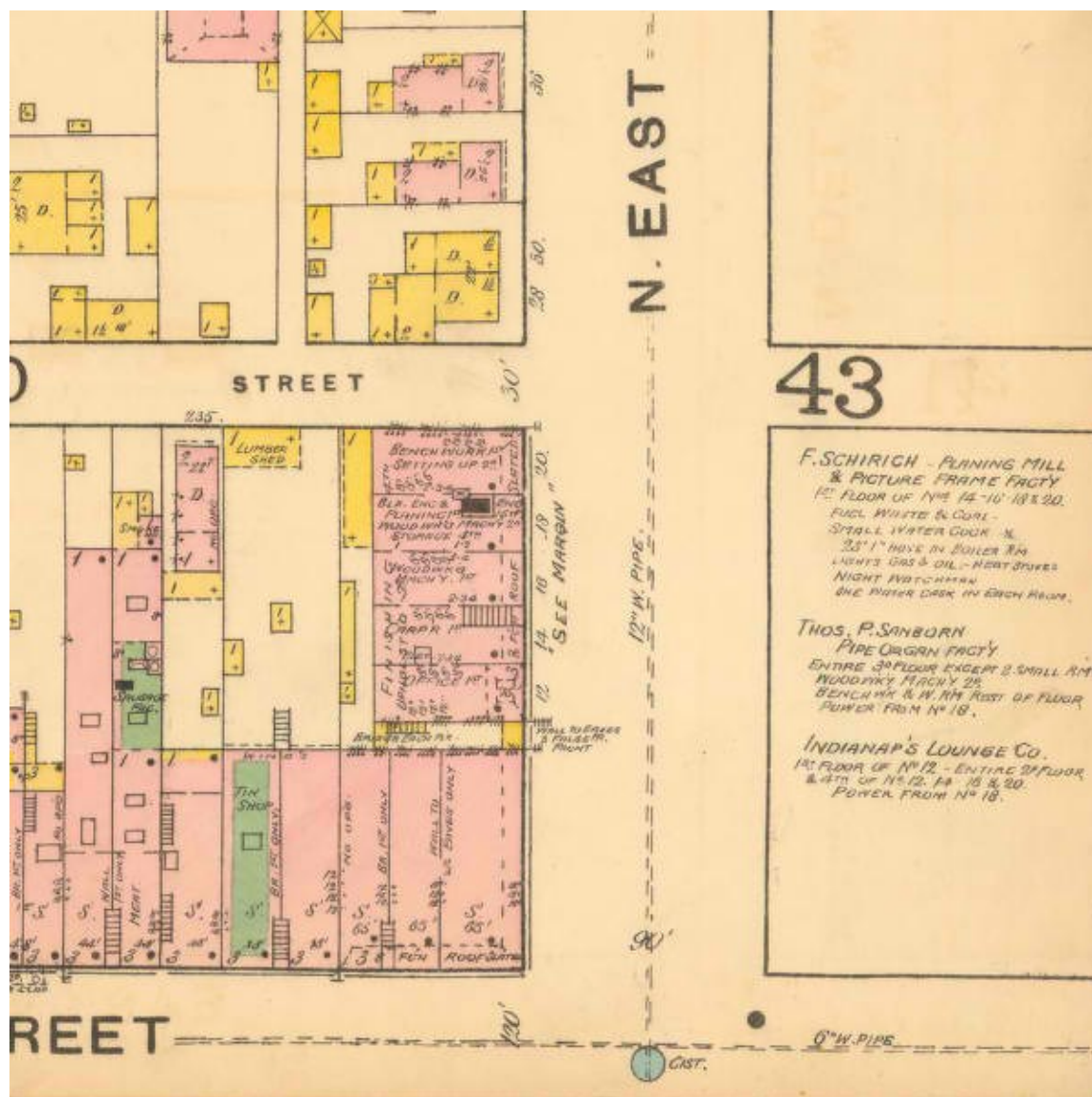


Figure 3b: T.P. Sanborn & Son shop location, 1887 Indianapolis, Indiana City Directory

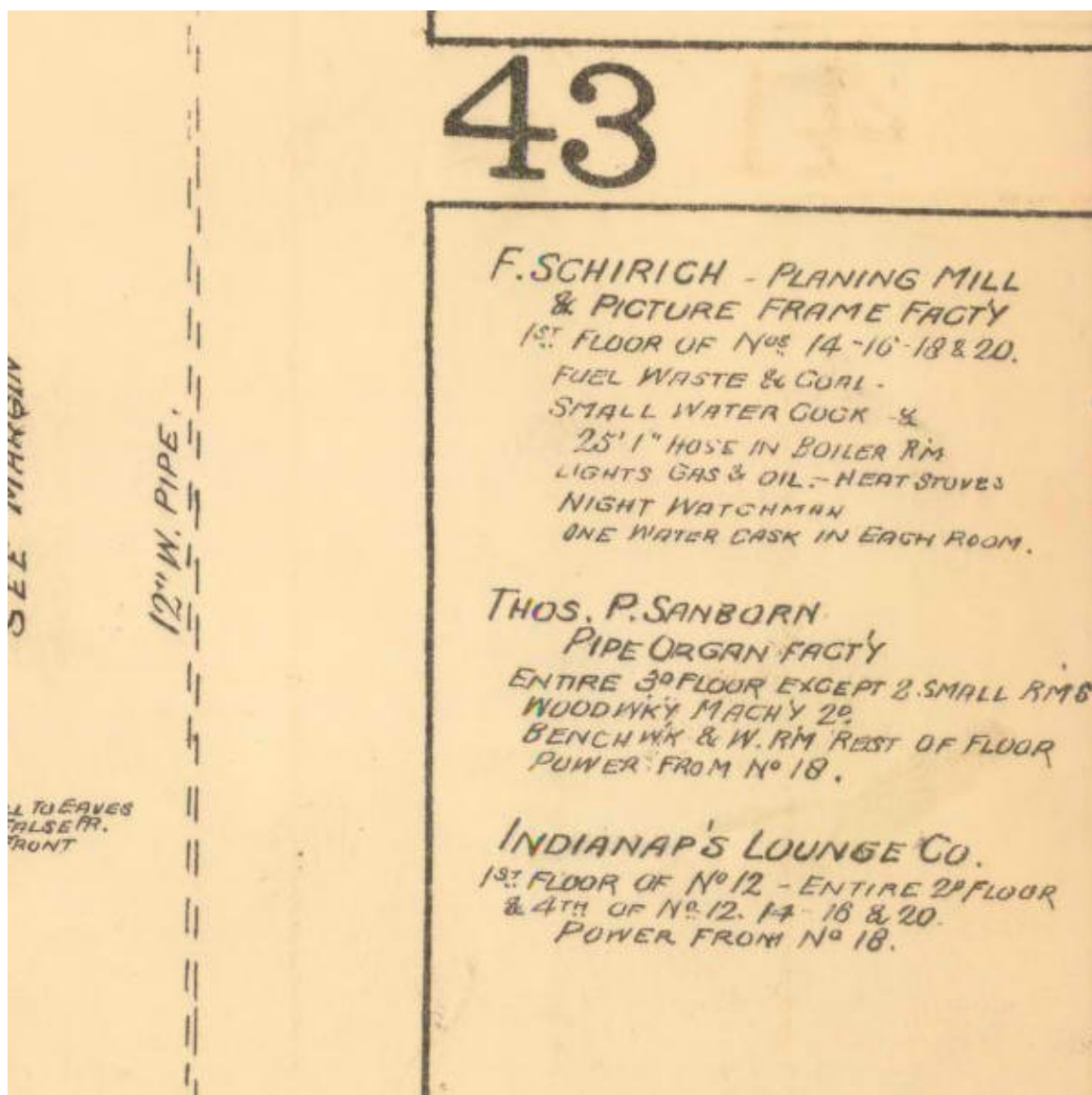


Figure 3c. T. P. Sanborn & Son organ factory description, 1887 Indianapolis, Indiana City Directory

T. P. Sanborn & Son,
CHURCH ORGAN
BUILDERS,

14 1-2 NORTH EAST STREET, INDIANAPOLIS, INDIANA.

Builders of 20 years' practical experience with the largest organs.

Builders of the large Concert Organ in Plymouth Church, Indianapolis, Ind.

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Figure 3d. T. P. Sanborn & Son advertisement in the 1885 Indiana Polk's Gazetteer



Figure 3e. T.P. Sanborn's second shop (behind the residential house),
Photo courtesy of the INDIANA HISTORICAL SOCIETY



3f. Photographs of T.P. Sanborn & Son for Memorial Presbyterian Church,
Photo Courtesy of Joe Roberts

Chapter IV. The 1883 T.P. Sanborn & Son organ for First Church German Evangelical Association, Indianapolis, Indiana

Thomas Prentice Sanborn's sole remaining organ in original condition is the fourteen-rank, 1883 instrument originally built for First Church Evangelical Association. This organ has been relocated three times in the last one hundred thirty years and is surely one of Sanborn's most traveled instruments. Originally housed in the New York Street Evangelical Church (now the Lockerbie Central United Methodist Church) of Indianapolis, Indiana, the 1883 Sanborn was later moved to Immanuel Presbyterian Church, Indianapolis, during the 1920s.¹⁶⁸ In 1989 it was renovated by Goulding & Wood and relocated to St. Francis Church in Zionsville, Indiana. This 1883 instrument is now in its fourth location at St. Mark's United Methodist Church, Bloomington, Indiana, where it was restored in 2006 by Michael Rathke, an organ builder then based near Greens Fork, Indiana. It is currently owned by the Jacobs School of Music, Indiana University, Bloomington, Indiana.

The 1883 Sanborn was contracted for First German Evangelical Church (First Church Evangelical Association). Originally named Immanuel Church, First German Evangelical Church first met on June 19, 1855.¹⁶⁹ Immanuel Church's name later changed to Salem and then First Church Evangelical Association. In the twentieth century, it was renamed New York Street Methodist Church and finally Lockerbie Square United Methodist Church. Lockerbie Square United Methodist Church and Central

¹⁶⁸ Schnurr, "Lockerbie," 124.

¹⁶⁹ Schnurr, "Lockerbie," 124.

Avenue United Methodist Church merged to form one large church in 2006.¹⁷⁰ The congregation held services in the old building at Central Avenue United Methodist Church (this church later became known as Old Centrum).¹⁷¹ The 1892 Sanborn housed at Old Centrum (now the Indiana Landmark's Center) will be discussed in Chapter 5.

The church building of First German Evangelical was located at the corner of New York and East streets and was constructed on November 4, 1882, by German immigrant and architect, Diedrich A. Bohlen.¹⁷² This red brick Romanesque building measured forty-five by seventy-five feet with a ceiling height of twenty-four feet. The space was formally dedicated on December 30, 1883.¹⁷³ Thomas Prentice Sanborn's 1883 two-manual, fourteen-rank mechanical-action instrument was constructed for the building. An inscription on the swell box of the instrument reads, "December 1883."¹⁷⁴ It is possible a recital was given at the dedication of the building, but no programs survive. The organ was originally hand pumped and a water motor was installed in 1903.¹⁷⁵ The following is the specification archived in the Jesse G. Crane Collection at the Indianapolis Public Library.

FIRST CHURCH EVANGELICAL ASSOCIATION
T.P. Sanborn & Son 1883

GREAT (Manual I)

8' Diapason
8' Melodia
8' Stopped Bass
8' Dulciana
4' Octave
4' Flute

¹⁷⁰ Schnurr, "Lockerbie," 124.

¹⁷¹ Schnurr, "Lockerbie," 124.

¹⁷² Schnurr, "Lockerbie," 124.

¹⁷³ Schnurr, "Lockerbie," 124.

¹⁷⁴ Schnurr, "Lockerbie," 124.

¹⁷⁵ Schnurr, "Lockerbie," 124.

2' Super Octave

SWELL (Manual II, enclosed)

16' Bourdon

8' Stopped Diapason Treble

8' Stopped Bass

8' Salicional

8' Aeoline

4' Flute

2' Piccolo

8' Oboe (from c⁰)

8' Bassoon (bass to 8' oboe)

PEDAL

16' Bourdon

Pedal Movements

Great Piano (8' Dulciana)

Great Forte (full)

Great to Pedal Reversible

Swell expression shoe

The Great manual had a sixty-one note compass; the Swell had a sixty-one note compass; and the Pedal had a twenty-seven note compass. The swell shoe was originally located at the far right end of the kick panel and the pedalboard of the instrument was flat.

No inscriptions on the pipework have been found, but several organ building scholars, most notably Michael Rathke, the 2006 restorer of the 1883 Sanborn, have attributed much of the pipework to the Pierce Organ Pipe Company in Reading, Massachusetts. Since in 1883 Sanborn was just starting out in his first location at 14 ½ North East Street, it is likely he initially purchased his metal pipes from suppliers to the trade.

Samuel Pierce (1819–1895) was the founder of the Pierce Organ Pipe Company. He was born on June 12, 1819 in Hebron, New Hampshire, and moved to Reading,

Massachusetts in 1837.¹⁷⁶ While in Reading, he apprenticed with George Badger (b. 1814), and in 1842 he joined the E. & G. G. Hook & Hastings Company in Boston, Massachusetts.¹⁷⁷ Pierce started out as a joiner and became experienced at making and voicing organ pipes. E. & G. G. Hook & Hastings encouraged Pierce to start his own independent pipe shop, and in 1846 he returned to Reading and founded a company that became a leading supplier to the trade by the 1860s.¹⁷⁸ Pierce died in Reading on September 22, 1895. David and Permelia Sears subsequently discovered his company records in a barn near Reading.¹⁷⁹ These letterbooks are now housed at the Organ Historical Society. Unfortunately, the first letterbook in the collection commences on October 27, 1884, and therefore the existence of correspondence between Thomas Prentice Sanborn and Samuel Pierce regarding pipework for the 1883 Sanborn cannot be verified. A catalogue of pricing for pipework by Samuel Pierce is provided in Appendix B.

In 1920, the First Church Evangelical Association acquired a new and larger instrument, op. 2724, built by M.P. Möller. This instrument was a three-manual electropneumatic-action organ. The contract was signed on June 16, 1919, and the instrument cost \$8,160.¹⁸⁰ Hope Leroy Baumgartner, a graduate of the Indianapolis Conservatory (1912), became organist at First Evangelical in 1909. He was the organ consultant for the new instrument and played the dedicatory recital. Part of Sanborn's

¹⁷⁶ Pinel, "The Letterbooks," 1.

¹⁷⁷ Pinel, "The Letterbooks," 1.

¹⁷⁸ Pinel, "The Letterbooks," 1.

¹⁷⁹ Pinel, "The Letterbooks," 1.

¹⁸⁰ Schnurr, "Lockerbie," 124.

original black walnut case remained and currently supports a Möller upper façade.¹⁸¹

Möller constructed a console of black walnut to match the woodwork of this case.

In 1920, the 1883 Sanborn was sold to Sutherland Presbyterian Church, which was located approximately one mile from First Church Evangelical Association at Twenty-Eighth Street and Guilford Avenue. This church was renamed twice: first as Immanuel Presbyterian Church and second as its current name, Salem Evangelical Baptist Church. Although the exact date Sutherland Presbyterian acquired the Sanborn is unknown, several occurrences lead to the conclusion that the organ was moved circa 1920. Firstly, Sutherland Presbyterian Church was built in 1920 and would have needed an instrument at that time to lead congregational singing. Secondly, the Möller that replaced the 1883 Sanborn at First Church Evangelical Association was dedicated in 1920. Finally, magazine pages dating from circa 1920 were used as shims under the Sanborn slider-stays at Sutherland.¹⁸²

A photograph, courtesy of Joe Roberts, of the façade at Sutherland Presbyterian Church (with Sanborn's original stenciled façade pipes) is provided in figure 4a on page 57. During the 1920s move, the tonal resources of the instrument were updated and several alterations were made to the structure of the console and façade. The keydesk for the organ was moved about a foot off center and the swell shoe was relocated near the center of the key desk. A concave, radiating pedal board was added circa 1920 (the original 1883 Sanborn featured a flat pedalboard).

Two plausible theories exist as to who moved the 1883 instrument to Sutherland Presbyterian Church. E-mail correspondence in May 2013 with Thomas Wood, of

¹⁸¹ Schnurr, "Lockerbie," 124.

¹⁸² Gingery, "The Organ," 1. (Appendix C)

Goulding & Wood, Inc., suggests that the work was carried out by Henry Pilcher's Sons. The case installed in Sutherland Presbyterian Church was not original to Sanborn, and Mr. Wood reported that several of the façade pipes had been moved to an offset chest. These pipes were activated by tubular pneumatic action similar to work exemplified by Henry Pilcher's Sons in Louisville, Kentucky.

Henry Pilcher, Sr. was born in Canterbury, England, and apprenticed as an organ builder in London. In 1832 he arrived in New York and established his business in Newark, New Jersey. His sons, Henry Pilcher Jr. and William Pilcher II, became organ builders in St. Louis, Missouri, in 1852, and relocated to Chicago soon thereafter. In 1874, they opened their business in Louisville, Kentucky, and built over 1,800 organs for area churches. Henry Pilcher's Sons closed in 1944 and was bought out by Möller. Pilcher's Sons did many refurbishments in the Indianapolis area in the early twentieth century; although we have no actual proof, it remains entirely possible that they were involved in the 1920 relocation of the 1883 Sanborn.

Michael Rathke suggests that the Sutherland organ may have been relocated by M. P. Möller. Several tonal modifications that were made to the instrument circa 1920 support this theory. First, the 4' Flute D' Amour on the Great was originally a Twelfth. (A faint pencil inscription of "Twelfth" was found on the stop action. A solitary Twelfth pipe also survived and will be discussed shortly). The 4' Flute is clearly of later construction and is thought to be by Möller.

Second, a Salicional stop, also likely by Möller, was added to the instrument around the 1920s. The original Salicional for the 1883 organ, much milder than the attractive but more aggressive new addition, was moved to the rear of the swell chest on a

jump slide, and was renamed Aeoline. (The lettering on the drawstop for the Aeoline rank differs very slightly from that of the other ranks.) The new Möller Salicional thus joined the original Sanborn Salicional in the Swell, but Sanborn's old Salicional (now Aeoline) was smaller in scale than the new Möller Salicional and, with limited space at the back of the Swell box, fit more easily on a jump slider. The Möller Salicional settled well into the Aeoline's former location, as the old Sanborn Salicional had originally been given more chest space than it needed.

In 1987, Sutherland Presbyterian Church, then known as Immanuel Presbyterian Church, relocated. Indiana organ historian Joe Roberts, a passionate advocate for old instruments, heard that Sutherland was contemplating discarding the 1883 Sanborn, and thus diligently searched for a new home for the instrument. Through Roberts's encouragement, Goulding & Wood, an Indianapolis pipe organ company founded in 1980 by John Goulding and Tom Wood, approached the Reverend Sandra Michels, Rector of St. Francis in the Fields, Zionsville, in late 1987, asking if the church wished to acquire an historic pipe organ.

After almost seventy years at Sutherland Presbyterian Church, the 1883 Sanborn was purchased for one dollar by St. Francis in the Fields, Zionsville, Indiana, and refurbished for \$34,000 by the Goulding & Wood Pipe Organ Company.¹⁸³ St. Francis in the Fields, Zionsville, was begun as a mission congregation in 1964; construction of a church building began in 1968.¹⁸⁴ The church continued to grow and was admitted as a parish to the Diocese of Indianapolis in 1994.¹⁸⁵ The congregation had been operating its music program with an electronic organ for several decades before being offered the

¹⁸³ Swiatek, "Zionsville Church," 1.

¹⁸⁴ Swiatek, "Zionsville Church," 1.

¹⁸⁵ Swiatek, "Zionsville Church," 1.

historic organ from Sutherland Presbyterian Church. The 1883 Sanborn organ made the twelve-mile journey to become an important part of that church's music ministry.

The 1883 Sanborn organ had not been in use for at least twelve years prior to Zionsville's acquisition of the instrument. It was filthy from fifty years of soot produced by the coal furnace in Immanuel Presbyterian Church. The instrument's first move had been "inexpert and careless. Associated modifications to horizontal tracker runs at that time—including a sideways shift to fit an awkward chamber configuration—placed lateral stresses on the action it had never been designed to tolerate. The situation was compounded by a structurally unstable chamber floor which allowed the key action to sag gradually over the years until the instrument became essentially one grand cipher."¹⁸⁶

During the 1989 restoration Goulding & Wood provided a new toeboard for the pedal chest and recovered all the pallets with new felt and leather. They used recycled wood salvaged from a discarded 1914 Hook & Hastings instrument to repair cracks in the table tops, and they flooded the key channels with liquid paraffin to prevent cross-channel runs. The chests of the organ were protected with a new lacquer finish, and the original double-rise reservoir was releathered. The key action was rebuilt. Both rollerboards and all backfalls were refurbished, and the old trackers were replaced with new basswood.¹⁸⁷

Goulding & Wood also cleaned and regulated the pipework, providing all open metal pipes with new tuning sleeves, and all stopped wood pipes with new leather. The blower was replaced, a new bench was constructed, and the keyboards were cleaned and, in some places, recovered with fresh ivory. A chamber did not exist at St. Francis in the

¹⁸⁶ Rathke, "The 2006 Restoration," 1.

¹⁸⁷ Gingery, "The Organ," 1.

Fields, and therefore, a brand-new case was designed incorporating twenty-one new polished zinc façade pipes that were purchased from Jacques Stinkens in the Netherlands.

¹⁸⁸ Sutherland Presbyterian Church kept the original Sanborn façade; it is unknown whether these stenciled pipes still exist.

The entire staff of Goulding & Wood assisted in the 1989 restoration of the 1883 Sanborn. Andrew Gingery (now a Project Manager for C.B. Fisk, Inc.) was the primary restorer of the instrument and Brandon Woods carried out pipe repairs and addressed voicing needs. Bob Duffy designed and constructed the new case. Figure 4b on page 105 is a picture of the completed instrument in the balcony at Zionsville. Organists from 1987 to 2006 at St. Francis in the Fields Zionsville included Greg Gilsdorf, Ailine Otten, Dwight Thomas, Don Livingston, Walter Smith, and John Coble. Currently the organist in residence is Lee Barlow. Most of these musicians are graduates of the Indiana University Jacobs School of Music, Bloomington, Indiana.

The sanctuary of St. Francis in the Fields was expanded twice during the seventeen years that the 1883 Sanborn was at this location. By 2006, the congregation had doubled in size and the sanctuary was twice its original size. The Sanborn was no longer deemed large enough to fit the needs of the growing congregation. In 2006, the parish decided to sell the instrument and purchase a II/27 electro-pneumatic instrument by John-Paul Buzard. This newer organ is nearly twice the size of the 1883 Sanborn.

The 1883 T. P. Sanborn & Son was purchased by Indiana University in 2006 and relocated to St. Mark's United Methodist Church, Bloomington, Indiana. Figure 4c on page 106 is a photograph of the 1883 Sanborn in the sanctuary at St. Mark's United Methodist Church (located at 100 North State Road 46 Bypass). The church was founded

¹⁸⁸ Swiatek, "Zionsville Church," 1.

in 1954 by Bishop Richard C. Raines as a result of the overcrowding of Fairview United Methodist Church, Bloomington, and First United Methodist Church, Bloomington. The Reverend Richard Hamilton was the first minister.¹⁸⁹ After holding services for several years in a funeral home, parishioners broke ground for the church on June 16, 1957.¹⁹⁰ The congregation flourished under Reverend Joe Emerson and the church broke ground for a second time in January of 1964.¹⁹¹ St. Mark's was heavily involved in campus ministry to Indiana University and in 1998 they expanded their facilities again, adding a fellowship hall, classrooms, and offices. These additions were dedicated on March 7, 1999.¹⁹²

The first music minister at St. Mark's was Anna Lee Hamilton, and she was followed by James Mellor.¹⁹³ Wallace Hornibrook, an Indiana University professor in the piano department, was music director from 1967 to 1996 leading one of the largest graded choir and handbell programs in Indiana, and one that had deep roots in the Indiana University music circle. Throughout Dr. Hornibrook's tenure, the church was home to at least one electronic organ, purchased in 1974.

Indiana University's acquisition of the 1883 Sanborn instrument was notable for several reasons. First, it allowed St. Mark's United Methodist Church the opportunity to have its first pipe organ. Second, it was the first time the instrument had left the city of Indianapolis, and the furthest distance it had traveled to date (40 miles).¹⁹⁴ Third, it would now serve not only as a liturgical instrument in worship, but also would be used by

¹⁸⁹ Schnurr, "Saint Mark's," 28.

¹⁹⁰ Schnurr, "Saint Mark's," 28.

¹⁹¹ Schnurr, "Saint Mark's," 28.

¹⁹² Schnurr, "Saint Mark's," 28.

¹⁹³ Schnurr, "Saint Mark's," 28.

¹⁹⁴ Rathke, "The Restoration," 1.

Indiana University for teaching, recitals, lectures, and workshops. It would become the first historically rooted instrument at Indiana University and a key part of Indiana's American Organ studies curriculum.¹⁹⁵ The specification of the instrument in its current state is as follows:

ST. MARK'S UNITED METHODIST CHURCH

Bloomington, Indiana
T. P. Sanborn & Son - 1883
2 Manuals – 14 Ranks

GREAT (Manual I)

8' Open Diapason (17 zinc basses in façade, remainder common metal, interior, 61 pipes)
8' Melodia Treble (from c⁰, pine, 49 pipes)
8' Unison Bass (stopped pine, 12 pipes)
8' Dulciana (from c⁰, spotted metal, 49 pipes)
4' Octave (4 zinc pipes in façade, remainder spotted metal, interior, 61 pipes)
4' Flute D'Amour (49 stopped wood, 12 open metal trebles, 61 pipes)
2' Super Octave (spotted metal, 61 pipes)

SWELL (Manual II, enclosed)

16' Manual Bourdon (from c⁰, stopped pine, 49 pipes)
8' Salicional (from c⁰, spotted metal, roller beards, 49 pipes)
8' Gedeckt Treble (from c⁰, 37 stopped pine, 12 open common metal trebles, 49 pipes)
8' Aeoline (from c⁰, spotted metal without beards, 49 pipes)
8' Stopped Diapason Bass (stopped pine, 12 pipes)
4' Flute Harmonic (common metal, 61 pipes)
2' Flageolet (spotted metal, 61 pipes)
8' Oboe (from c⁰, zinc and spotted metal, 49 pipes)
8' Bassoon (zinc and spotted metal, 12 pipes)

Pedal

16' Bourdon (stopped pine, 27 pipes)

COUPLERS

Great to Pedal
Swell to Pedal
Swell to Great

ACCESSORIES

Bellows Signal

¹⁹⁵ Rathke, "The Restoration," 1.

Great Piano (8' Dulciana)
Great Forte (full)
Great to Pedal Reversible
Swell expression shoe

The organ had been relocated three times in its 122 years of existence and was a candidate for significant restoration. Michael Rathke of M.P. Rathke, Inc., then of Greens Fork, Indiana, was contracted by Indiana University to move and refurbish the instrument for \$25,000. Others involved in the restoration process included Ilze Akerbergs, Viera Efflerova, Andrew Gingery, John Goulding, Laura Potratz, Walter Smith, and Elaine Sonnenberg.

The 1883 Sanborn had been known for being a tonally fine organ with a poor action. The move to Immanuel Presbyterian in the 1920s had featured a “less-than-meticulous installation, skewed tracker runs, and a sagging building substructure.”¹⁹⁶ While the organ was at St. Francis in the Fields, the action was often referred to as stiff, and numerous parts of the action broke on a regular basis. Michael Rathke, during the 2006 restoration, refurbished the entire key action, replacing many cracked, worn, misaligned, and broken components and reduced the friction to all of the moving parts of the action.¹⁹⁷

In a letter to Christopher Young on April 18, 2006, provided in Appendix C, Rathke described the details of the restoration of the instrument’s action. First, he replaced all manual pallet felt and leather with thinner material. Goulding & Wood had used 7/32” leather, which was the thickest available and is normally used only for Pedal pallets. The leather was also poorly cut, leaving overhanging felt that rubbed against the pallet side guide pins and added extra friction. Rathke also reflattened all of the pallets

¹⁹⁶ Rathke, “The Restoration,” 1.

¹⁹⁷ Rathke, “The Restoration,” 1.

and repaired splits in pallet screw eye locations. (The holes for the pulldown eyes had been drilled too small, causing some splitting of the wood around the screw threads.) After repairing the cracks, he bored new screw eye root holes next to the previous hole locations and installed new, longer screw eyes. Michael Rathke also shimmed some of the pallets and relocated some side guides.¹⁹⁸

Pulldown links replaced in 1989 were at varying lengths and were therefore replaced again in 2006. The pulldown wires were straightened and polished and the manual pallet springs were realigned and adjusted. The new trackers supplied in 1988 were .065” thick, but the slots in the original rollers square arms were only .060” thick. The former were thinned during the 2006 restoration, which eliminated an enormous amount of friction and stress on the action. The square rail assemblies, which had likely deteriorated further during their time at Zionsville, were repaired via resecuring the axles and repairing split wood. The manual keys were reflattened and polished, key tails and ramps were releathered, the manual coupler pivot rail was repaired, and toeboards were reshimmied as needed.¹⁹⁹

Prior to the installation of air conditioning at Zionsville, the organ was subject to summer gallery temperatures of over 100⁰ F which had contributed to stresses on the action. Unfortunately, the soaring temperatures at Zionsville also caused the paraffin added by Goulding & Wood in 1989 to liquefy. Rathke painstakingly removed all of the excess paraffin from the pallet slots and key channels.

Polishing and restorative revoicing the pipework of the instrument was also accomplished during the 2006 restoration. The five wood ranks in 2006 were essentially

¹⁹⁸ Rathke, “Letter,” 2–4.

¹⁹⁹ Rathke, “Letter,” 2–4.

in their original condition apart from being coated inside with thick beeswax from the 1989 refurbishment (this was removed). “All metal pipework had been fitted with coke tin tuning sleeves, apparently at the time of the 1920s move; these were replaced with aluminum in 1988 (sic) and left so in 2006, in large part because of the need for the instrument to remain playable at A-440.”²⁰⁰

The metal flutes and strings had remained in substantially original condition, but the principals had had their original “bold nicking crudely rubbed out.. and upper lip bevels had been sharpened to a knife’s edge, as opposed to the more blunt skiving typical of the period. Upper/lower lip alignment was erratic, some of which appeared to have been caused by aggressive reskiving; in terms of speech the diapasons were uncharacteristically inconsistent, as well as being curiously flat dynamically from bass to treble.”²⁰¹ Fortunately, the cutups had not been altered, and a few of the principal pipes were found untouched, with nicking and windways undisturbed. These pipes, which appeared to be in virtually original condition, were used as a reference point as Michael Rathke restoratively revoiced the pipework. As a result of Rathke’s work, the 8’ Great Diapason now reflects 19th century treble-ascendant voicing where the sound was milder in the bass and became more intense, slightly increasing in dynamic as one played up the compass.

A second reference point for the voicing done in 2006 was a pipe from the original Twelfth on the instrument. This pipe is presently installed as an infill pipe in the Great 4’ Octave (most likely to replace a damaged pipe). In an e-mail correspondence

²⁰⁰ Rathke, “The Restoration,” 1.

²⁰¹ Rathke, “The Restoration,” 1.

with Michael Rathke on June 27, 2013, he mentioned a desire to reconstruct the Twelfth for the Sanborn someday based on the original pipe currently in use.

Rathke used the Oboe from the 1892 Sanborn as a third point of reference during the voicing of the 1883 instrument. The 1892 Sanborn's Oboe was in poor physical condition in early 2007 and was in serious need of structural attention. Rathke was asked by Reynolds Associates to clean, repair, and carry out basic physical repairs to the 1892 oboe for the 2007 Organ Historical Society Convention. Luckily, the tongues of the Oboe of the 1892 appeared to have suffered little apart from the occasional kink. The 1892 Oboe could thus serve as a double-check for the work Rathke was then completing on the 1883 Oboe.

Following the 2006–2007 M. P. Rathke restoration, the 1883 Sanborn was featured as part of the Organ Historical Society 2007 Convention and recognized as a historic organ on July 16, 2007. A plaque commemorating the instrument was presented to Christopher Young, a representative from Indiana University, and Elaine Sonnenberg, a representative from St. Mark's United Methodist Church. Following this presentation, Dr. Young provided a concert for the Organ Historical Society on the 1883 Sanborn. Christopher Young is currently Professor of Music at the Indiana University Jacobs School of Music, Bloomington, Indiana, where he teaches applied organ and several courses for the organ department. Dr. Young was instrumental in the acquisition of the 1883 Sanborn for Indiana University. He provided the following program for the Organ Historical Society:

Three Pieces for a Chamber Organ (publ. 1842)
III. Choral Song [and Fugue]

Samuel Sebastian Wesley
1810–1876

Five Sketches, Opus 32 (publ. 1893)	Horatio Parker 1863–1919
A Quaker Reader (1976) – Ned Rorem IV. “There Is a Spirit that Delights to Do No Evil...”	b. Richmond, 1923
The King of Instruments (1978) IV. The Flues Blues	William Albright b. Gary, 1944, d. 1998
Hymn No. 563: Father, We Thank You	ALBRIGHT
Pièces de fantaisie, 3 ^{me} Suite, Opus 55 (1927) II. Impromptu	Louis Vierne 1870–1937
Variations for Organ on Foster’s Melody “Old Folks at Home” (1888)	Dudley Buck 1839–1909 ²⁰²

A complete pipework chart by Michael Rathke, with scaling for the 1883 Sanborn, is provided in figure 4d on page 107. Although the organ was originally hand pumped, the feeder bellows and mechanism had disappeared by the organ’s arrival at Immanuel Presbyterian; the air supply is currently via the rotary fan blower installed by Goulding & Wood in 1989. The entire organ is under 3-1/8” of wind pressure, which Rathke believes to be the original 1883 wind pressure. It features a double-rise reservoir (figure 4e on page 108) with a curtain box. Although this reservoir is original to the Sanborn, the curtain box was added later by an unknown builder.

The console of the organ is entirely mechanical, including the coupling systems, and the stop controls are all drawknobs. The swell action is conveyed by stickers to a square rail, which reorients the motion by ninety degrees. From here, trackers proceed rearward in a horizontal plane. The next turn in the action occurs at a second square rail below the swell rollerboard, which in turn spreads the action laterally beneath the swell

²⁰² *Hoosier Holiday*, 54.

pallet box (figure 4f on page 109). The pallet is thus pulled down via a short connecting link and is returned by the pallet spring. The Great action is via a conventional arrangement of stickers, splayed backfalls, and a rollerboard. The manual coupling system is via a simple pivot rail located between the Swell and Great key tails.

The manual windchests of the 1883 Sanborn are slider/pallet chests with common note channels. The Swell division of the organ is under expression, which is controlled mechanically as well—the swell shades are moved by a set of linkages (figure 4i on page 112). This instrument includes one ancillary device, a tremulant, which is attached to the back of the Swell pallet box. Although this tremulant does not match Sanborn's patented tremulant, it is likely that it is original to Sanborn.

The organ is comprised of fourteen ranks of pipe work, with the Great division (manual I) featuring six of these fourteen ranks. All six are various types of flue pipes. The Open Diapason has sixty-one pipes total, seventeen of which were provided by Goulding & Wood; they are made of zinc and appear in the façade of the organ. Located behind the façade, the remainder of this rank is made of common metal. The Open Diapason has a diameter of 148mm at CC and 70mm at tenor F. According to Michael Rathke, low CC of the original Sanborn would likely have been closer to 155mm. Both the Dulciana 8' and Melodia Treble 8' ranks have forty-nine pipes total with the twelve white pine pipes of the stopped Unison Bass providing the lowest octave. This is a feature common on both William Horatio Clarke and E. & G. G. Hook and Hastings organs. The Melodia Treble 8' is made of white pine and is stopped from tenor C to F, with the lowest pipe measuring 45 X 60 mm in cross-section. The lowest open pipe of the Melodia Treble measures 45mm X 55 mm.

The 4' Octave features sixty-one pipes total with four zinc pipes in the façade and the remaining spotted metal pipes inside on the chest. Low CC measures 82mm; the first inside pipe, EE, measures 76mm. The four façade pipes were provided by Goulding & Wood during the 1989 refurbishment. Forty-nine of the sixty-one pipes of the Flute D' Amour (likely an M.P. Möller stop) are stopped pine, while the twelve common metal treble pipes are open. The lowest pipe of this rank measures 47mm X 57mm. The 2' Super Octave has sixty-one pipes made of spotted metal and measures 64mm at CC.

On the Swell division (Manual II) of the organ are seven ranks of pipework, with six ranks of flue pipes and one rank of reed pipes. The Manual 16' Bourdon is made of white pine with the lowest note of the forty-nine pipes (C₀) measuring 55mm X 75mm. This rank of pipes utilizes German blocks throughout. German blocks have the windway cut from the block (as opposed to English blocks, where the windway is cut in the cap). Another flue rank, the Gedeckt Treble 8', is made of white pine, as well, with twelve pipes of the top octave comprised of open common metal. The lowest pipe (tenor C) measures 43mm X 62mm. All forty-nine pipes of the present Salicional 8' have roller beards and are made of spotted metal. As stated earlier, this stop was likely supplied by M. P. Möller.

The original Sanborn Salicional, now labeled 8' Aeoline, is comprised of forty-nine spotted metal pipes without beards and, as indicated previously, is now on a jump slider at the back of the swell chest. Tenor C of the Aeoline measures 48mm in diameter. The Stopped Diapason Bass 8' pipes have German blocks and are made of white pine. They serve as the lowest octave for the Gedeckt Treble, Salicional, and Aeoline ranks. The 4' Flute Harmonic has sixty-one pipes of common metal with the lowest measuring

59mm and the first harmonic pipe at 40mm. The Flageolet 2' consists of sixty-one pipes of spotted metal with the lowest measuring 44mm.

The sole reed pipe on the organ is the Oboe/Bassoon: the Oboe drawstop moves the slider into place for the top forty-nine pipes of the rank while the Bassoon knob controls the lowest octave. This arrangement offered a number of registrational possibilities, among them the playing of a melody on the Oboe and accompanying it with the lowest octave of another rank of pipes. The low and midrange pipes of this rank have zinc stems and spotted metal bells; the top octave comprises twelve open flues of spotted metal. For the Oboe rank, tenor C measures 64mm at the bell top and 26.5mm at the bell/stem joint, and the lowest note of the Bassoon rank measures 90mm at the bell top and 35mm at the bell/stem joint.

Thomas Prentice Sanborn's 1883 organ has one pedal stop, the 16' Bourdon, made of white pine at a scale of 124mm X 206mm. The pedalboard, although an early form of concave/radiating is not original and is not AGO standard, with twenty-seven notes total. Three unison couplers are provided: Swell to Great, Great to Pedal, and Swell to Pedal. There are also three composition pedals: the Piano pedal which draws the 8' Dulciana and Unison Bass only, the Forte Pedal which engages the Full Great, and the Great to Pedal reversible (figure 4j on page 113). These composition pedals were predecessors to the combination action and were used in smaller instruments by William Horatio Clarke and E. & G. G. Hook and Hastings.

Michael Rathke provided the following information regarding the bungboard latches used for the 1883 Sanborn via e-mail on September 21, 2013:

Sanborn used two styles of bungboard latches in his 1883 instrument. One, applied to the Great only, consisted of simple bar latches made from thin sheet

steel & anchored by ordinary wood screws. The Swell and Pedal utilized Sanborn's unique trademark bung latches, presumably of his own design, which acted in the manner of a cam clamp. The advantage of the trademark latches was that they were much faster to remove and refasten, requiring no tools apart from the organ builder's own hands.

Figure 4n on page 117 is a sketch by Michael Rathke of the two different types of bungboard latches found in the 1883 Sanborn. Surviving physical evidence and photographs suggest that Sanborn used Clarke's simple latch design in his earliest instruments, gradually introducing his own signature latches where it made sense to do so. (Rathke also points out that although the signature cam latch was a decided improvement on the simple bar latch, it was also a bit thicker and thus required slightly more space. This would explain why Sanborn retained the old, simple style in select instances, even on his later instruments.) The 1879 W.H. Clarke instrument employs the same style bungboard clamps as the Great of the Sanborn 1883 (figure 4k on page 114). The signature bungboard latches utilized for the Pedal and Swell windchests of the 1883 Sanborn (figure 4l on page 115 and figure 4m on page 116) were also found in the 1887–1889 organ for Memorial Presbyterian Church, Indianapolis, Indiana, and the 1892 instrument for Central Avenue United Methodist Church, Indianapolis, Indiana.

The 1883 instrument is similar in disposition and tonal design to the 1873 E. & G.G. Hook & Hastings, Op. 724 for First Congregational, Wellfleet, Massachusetts and the 1879 W.H. Clarke & Co. for Sacred Heart of Jesus Roman Catholic Church, Shelby, Ohio. The 1883 Great is based on the 8' Open Diapason, and its original Great division (with the Twelfth) was nearly a carbon copy of both the 1879 Clarke and 1873 E. & G.G. Hook organs. The 1883 organ features several tenor-c stops with a common bass: the Melodia Treble 8' and Dulciana 8' on the Great share a common bass, the Unison Bass

8', for the lowest octave. The 1879 W.H. Clarke follows the same practice for these stops. On the Swell division of the Sanborn, the Bassoon 8' serves as the lowest octave for the Oboe 8'; the Stopped Diapason Bass serves all Swell 8' flue stops. Similar to the 1879 Clarke, the 1883 has a sixty-one note manual compass, a flat pedalboard (originally) with a twenty-seven note compass, one pedal stop (a 16' Bourdon), and three compositional pedals. The swell shoe for the 1883 Sanborn was originally located to the right of the pedalboard, similar to the Swell shoe placement on the 1879 W. H. Clarke.

The cabinetry and internal mechanics of the 1883 Sanborn clearly resemble the 1879 W. H. Clarke & Co., for Shelby, Ohio. First, the Great backfall assemblies are nearly identical in construction. Figure 2f (page 57) is a photograph of these levers in the Clarke instrument and figure 4h (page 111) is a picture of the same mechanism in the 1883 Sanborn. The rollerboard for both organs is also similar (figure 2h, page 58; 1879 Clarke, figure 4f & 4g, pages 109 and 110; 1883 Sanborn) and the cabinetry on the consoles of both instruments is similar in style, especially the music rack (figure 2d, page 56, 1879 Clarke; figure 4c, page 106, 1883 Sanborn).

Many of the stops on the 1879 Clarke and the 1883 Sanborn correspond to one another in tone. The 8' Open Diapason on the Great of both instruments has a mellow, refined timbre and increases in dynamic with treble ascendancy. The 4' Octave and 2' Super Octave have a brighter thinner quality than the Open Diapason. On both the 1879 W. H. Clarke and the 1883 Sanborn, the Dulciana 8' has a light stringy sound and the 8' Melodia has a beautiful, pure flute tone. The Swell divisions of the 1879 Clarke and 1883 Sanborn are similar in clarity to the Great, but at a softer dynamic. All of the ranks of

both instruments blend exceptionally well, producing a full chorus with an unusually balanced sound

The 1883 Sanborn is the sole remaining T.P. Sanborn & Sons organ in near-original condition. It features many stylistic traits of instruments by the organ builders Thomas Sanborn studied with and worked for: E. & G.G. Hook & Hastings and William Horatio Clarke. In particular, the disposition, construction, and tonal design of the 1883 Sanborn are reminiscent of the 1879 W. H. Clarke. This clearly solidifies the hypothesis that the 1879 W. H. Clarke was built under T. P. Sanborn's direct supervision; it is therefore an early example of Thomas Prentice Sanborn's organ output.



Figure 4a. 1883 Sanborn & Son at Immanuel Presbyterian Church,
Indianapolis, Indiana
Photograph Courtesy of Joe Roberts



Figure 4b. 1883 Sanborn & Son at St. Francis in the Fields Episcopal Church



Figure 4c. T. P. Sanborn & Son, St. Mark's United Methodist Church
Photograph Courtesy of William T. Van Pelt

	<i>Pitch</i>	<i># of Pipes</i>	<i>Material</i>	<i>Scale in millimeters (I.D.)--measured at lowest note in stop</i>	<i>Comments</i>
GREAT					
Open Diapason	8'	61	zinc & common metal	148 at low CC; 70 at tenor F	17 new zinc by G&W in façade, rest interior CM
Melodia Treble (TC)	8'	49	white pine	45 X 55 at tenor F (open)	45 X 60 at tenor C (stopped)
Dulciana (TC)	8'	49	spotted metal	58	
Unison Bass	8'	12	stopped white pine	72 X 96	
Octave	4'	61	zinc & spotted metal	82 at low CC; 76 at low EE	4 new zinc by G&W in façade, rest interior SM
Flute D'Amour	4'	61	49 stopped pine and 12 open CM	47 X 57	Lovely but <u>not</u> original - S/A backfall marked "Twelfth"
Super Octave	2'	62	spotted metal	54 at low C	
SWELL					
Manual (<i>sic</i>) Bourdon (TC)	16'	49	stopped white pine	56 x 75	German blocks
Gedeckt Treble (TC)	8'	49	stopped wh. pine w. 12 CM trebles	43 x 62	German blocks to tenor E; remainder sunken English blocks
Salicional (TC)	8'	49	spotted metal w. roller beards	50	not original; added via jump slide at back of SW chest
Aeoline (TC)	8'	49	spotted metal without beards	48	
Stopped Diapason Bass	8'	12	stopped white pine	72 x 97	German blocks
Flute Harmonic	4'	61	common metal	59	40mm 1st harmonic pipe
Flageolet	2'	61	spotted metal	44	
Oboe (TC)	8'	49	zinc stems, SM bells; 12 SM trebles	bell top = 64; bell/stem joint = 26.5	Top octave flue pipes
Bassoon	8'	12	zinc stems, SM bells	bell top = 90; bell/stem joint = 35	Oboe construction (double taper)
Tremolo					connected to SW pallet box
PEDAL					
Pedal (<i>sic</i>) Bourdon	16'	27	stopped white pine	124 X 206	
Three unison couplers					
Bellows Signal (knob only)					
Great Piano composition pedal (draws 8' Dulciana and Unison Bass)					
Great Forte composition pedal (draws full Great)					
Great to Pedal reversible pedal					
Swell expression shoe (originally located at RH end of pedalboard)					

Figure 4d. 1883 T. P. Sanborn & Son, pipe scalings,
Courtesy of Michael Rathke



Figure 4e. 1883 T. P. Sanborn & Son
double-rise reservoir
Photograph Courtesy of Michael Rathke



Figure 4f. 1883 T. P. Sanborn & Son,
Swell roller board
Photograph Courtesy of Michael Rathke



Figure 4g. 1883 T. P. Sanborn & Son,
Swell and Great Roller boards, square rails
Photograph Courtesy of Michael Rathke



Figure 4h. 1883 T. P. Sanborn & Son,
Great backfall assembly, Swell trackers (horizontal)
Photograph Courtesy of Michael Rathke



Figure 4i. 1883 T. P. Sanborn & Son,
Swell shades and trace
Photograph Courtesy of Michael Rathke



Figure 4j. 1883 T. P. Sanborn & Son,
pedalboard, composition pedals, Great to Pedal reversible, Swell shoe
Photograph Courtesy of Michael Rathke



Figure 4k. 1883 T. P. Sanborn & Son
Great bungboard clamp
Photograph Courtesy of Michael Rathke



Figure 4l. 1883 T. P. Sanborn & Son
trademark bungboard clamp (Pedal chest)
Photograph Courtesy of Michael Rathke



Figure 4m. 1883 T. P. Sanborn & Son
trademark bungboard clamp (Swell chest)
Photograph Courtesy of Michael Rathke

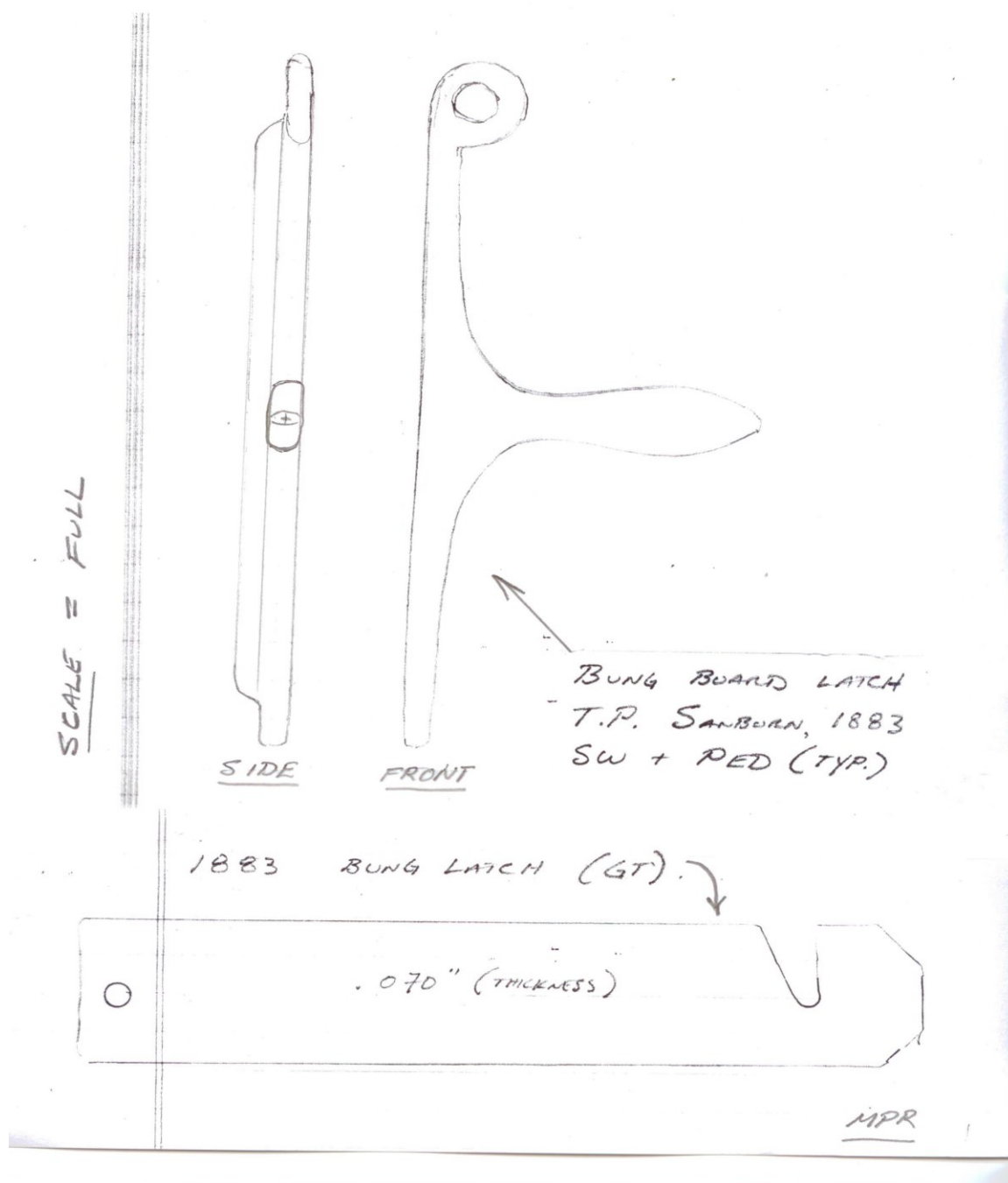


Figure 4n. 1883 T. P. Sanborn & Son
bungboard clamps
Drawing Courtesy of Michael Rathke

Chapter V. The 1892 T.P. Sanborn & Son organ for Central Avenue United Methodist Church, Indianapolis, Indiana

Of the two extant instruments by Thomas Prentice Sanborn, the 1883 Sanborn is regarded as the only instrument that survives close to its original state. One other organ, the 1892 Sanborn, resides in the Cook Grand Hall of the Indiana Landmarks Center at Central Avenue and East Twelfth Street, Indianapolis, Indiana. It is substantially intact tonally, but the original action and winding have been completely replaced utilizing non-original technology; thus this instrument is considered a rebuild.

The Indiana Landmarks Center was originally Central United Methodist Church. On May 17, 1854, sixteen members of Robert's Park United Methodist Church organized Seventh Methodist Episcopal Church.²⁰³ In 1856, a church was built at the corner of North and Alabama Streets, and it was renamed North Street Methodist Episcopal Church. A larger building was built on the same property in 1855, dedicated by Rev. T.M. Eddy in December, and given the name Trinity Methodist Episcopal Church.²⁰⁴ Trinity purchased its first organ from Wm. H. Clarke & Co. in November of 1874 for \$850.²⁰⁵

In 1870, a new congregation, Massachusetts Avenue Methodist Episcopal, formed, eight blocks from Trinity Methodist Episcopal Church. The two churches united in 1876 and moved north to Butler Street (now Twelfth Street) to form Central Avenue United Methodist. The new congregation held its first service on June 17, 1877.²⁰⁶

²⁰³ Schnurr, "Old Centrum," 146.

²⁰⁴ Schnurr, "Old Centrum," 146.

²⁰⁵ Schnurr, "Old Centrum," 146.

²⁰⁶ Schnurr, "Old Centrum," 146.

William H. Clarke and Co.'s organ was moved to the new building that year for a cost of \$266.09.²⁰⁷

After a tornado caused serious damage to the building on May 4, 1879, talks began for the building of a new church. A committee was formed and the cornerstone was laid on September 12, 1891.²⁰⁸ The Romanesque building with red brick and Indiana limestone was dedicated by Bishop Thomas Bowman on June 5, 1892 (figure 5a, on page 139).²⁰⁹ The auditorium plan building featured an eight thousand square foot room that seated one thousand three hundred people.²¹⁰ By the 1920s, Central Avenue United Methodist Church was the largest Methodist Church in the state of Indiana.

The funds to construct Thomas P. Sanborn's 1892 instrument were raised by a Merchant's Carnival on March 31 and April 1, 1891.²¹¹ "One hundred and fifty costumed ladies participated in a grand march and battalion drill, each young lady representing an Indianapolis business."²¹² The newspaper coverage of this event did not specify that the organ was by Thomas Prentice Sanborn, but all other evidence leads to this conclusion. Thaddeus B. Reynolds of Reynolds Organ Associates found the initials "TPS'S" inscribed on the mouths of several pipes, which was an abbreviation for "Thomas Prentice Sanborn and Son."²¹³ According to Reynolds's report to the Old Centrum Foundation in 2004, C⁰ of the Swell 8' Violin Diapason was inscribed with Sanborn's full name. Two pipe inscriptions are included in Figure 5b and 5c (pages 140 and 141).

²⁰⁷ Schnurr, "Old Centrum," 146.

²⁰⁸ Schnurr, "Old Centrum," 147.

²⁰⁹ Schnurr, "Old Centrum," 146.

²¹⁰ Schnurr, "Old Centrum," 146.

²¹¹ Schnurr, "Old Centrum," 146.

²¹² Schnurr, "Old Centrum," 148.

²¹³ Schnurr, "Old Centrum," 148.

The surviving 1910 photograph of the instrument (figure 2d, page 142) shows the keydesk was centered at the base of the case and was not detached. It may have been slightly projecting, a common practice in organ building in the 1890s. The 1892 Sanborn originally had a water motor or steam motor. On March 24, 1909, a Kinetic blower (fan blower) was purchased and shipped to Central Avenue United Methodist.²¹⁴ A stop list of this instrument at Central United Methodist Church from the Jesse G. Crane Collection in the Indianapolis Public Library is as follows:

CENTRAL UNITED METHODIST CHURCH²¹⁵

Indianapolis, Indiana

T. P. Sanborn—1892

GREAT (Manual I)

16' Tenoroon (metal open diapason)

8' Diapason (scale 43)

8' Melodia

8' Doppel Flute

8' Gamba

8' Dulciana

4' Octave (scale 58)

4' Concert Flute (a Doppelflöte)

2 2/3 Octave Quint

2 Super Octave (scale 72)

[III] Mixture

8' Trumpet

8' Clarinet

SWELL (Manual II, enclosed)

16' Bourdon Bass

16' Bourdon Treble

8' Violin Diapason

8' Gedect Treble

8' Unison Bass

8' Salicional

8' Aeoline

4' Principal

4' Violina

4' Flute

²¹⁴ Schnurr, "Old Centrum," 146.

²¹⁵ Schnurr, "Old Centrum," 148.

2' Flageolet (harmonic)
[III] Mixture
8' Oboe (from c⁰)
8' Bassoon (bass for 8' Oboe)
8' Vox Humana
Tremulant

PEDAL

16' Diapason
16' Bourdon
8' Cello

COUPLERS

Great to Pedal
Swell to Pedal
Swell to Great

PEDAL MOVEMENTS

Swell expression shoe
Great to Pedal reversible
Great Convertible 1 (with setter pedal)
Great Convertible 2 (with setter pedal)
Great P
Great F
Swell Convertible 1 (with setter pedal)
Swell Convertible 2 (with setter pedal)
Swell F
Full Organ

ACCESSORIES

Bellows Signal
Pedal Check

Great Mixture composition

CC-c¹ 1 1/3, 1, 1/2
c^{#1}-c² 2, 1 1/3, 1
c^{#2}-c⁴ 5 1/3, 2, 2

Swell Mixture composition

CC-c^{#0} 2, 1 1/3, 1
d⁰-c² 2 2/3, 2, 1
c^{#2}-c³ 2 2/3, 2, 1
c^{#3}-c⁴ 4, 4, 2 2/3

Quints with arched mouths.

The organ featured a very large double-rise reservoir, which no longer exists. Its console was entirely mechanical, including the coupling systems, with pneumatic assists applied to the bottom twenty-five notes of each windchest. The pneumatic assists presumably utilized the valve-mechanism design of Sanborn's second patent, which was signed on December 15, 1892. Thaddeus Reynold's report to the Old Centrum Foundation in 2004 regarding this valve-mechanism design reads:

In December 1891, as he was building the Central Avenue organ, Sanborn applied for and was granted his second patent, No. 394,428, for a "Valve Mechanism." This invention was actually an assist pneumatic mounted inside the pallet box to relieve the heavy keyboard resistance that was a problem in tracker organs of the period. This problem, which was most evident in the bottom of the keyboard compass, was caused by the relatively large size of the pallets (the Great chest at Central contains thirteen stops). The pneumatic assist mechanism essentially neutralized the effects of the internal chest pressure against the pallets, greatly lessening the finger pressure needed to move them. Sanborn applied these assists to the bottom 25 notes of each of his main windchests at Central Avenue, as evidenced by borings for these assists that still exist.²¹⁶

This patent, no. 394,423, was filed on May 28, 1891. The text accompanying the patent was as follows:

To all whom it may concern:

Be it known: that I, THOMAS P. SANBORN, of Indianapolis, county of Marion, and State of Indiana, have invented certain new and useful improvements in Organ-Valve Mechanism; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, in which like letters refer to like parts.

My invention relates to improvements in the construction of mechanism for operating organ-valves; and its object is to equalize and balance the pressure upon the valve by means of an auxiliary air-chamber and bellows, so that the valve will respond easily and readily to a slight touch upon the key, and will be understood from the following description:

The drawing represents a cross-section through the organ on the central line of the auxiliary air-chamber, the key and lever below being in elevation.

²¹⁶ Schnurr, "Old Centrum," 149.

In detail, 1 is the casing of the organ; 2, the principal wind-chest; 3, the pipes, and 4 the sliders for admitting air from the wind-chest into the pipes.

5 is the valve at the bottom of the main chest, which is partly controlled by the spring 6, connected at one side.

8 are pins for guiding the movement of the valve, one of these being in a slot 7 at one end of the valve.

9 is a screw-pin connected to the valve 5 for adjusting its movement and secured below to a metal piece hinged at 10 to a block fastened upon the top of the collapsible bellows 13.

11 is an auxiliary air-chamber connected to the main chest directly below the valve 5, having an air-opening 12.

13 is an auxiliary bellows having at one end a guide-block 14, which works on a pin 15, for steadying the bellows during its vertical movement.

16 is a valve-rod having a valve 17 on its upper end, which closes an opening in the top of the bellows 13 and passing down through an opening 19 in the bottom of the air-chamber, and 18 is a valve for closing such opening.

20 is a spring whose tension bears against the under-side of the valve 18, normally keeping it closed.

21 is a link which connects the rod 16 to a staple 22, which passes through the end of a rocking lever 23, pivoted at 24 to the upright 25.

26 is a screw-pin entering the opposite end of the lever 23 and resting below on the lever 27, pivoted at 28 to the frame-work, having a key 30 on its outer end and supported from beneath by a pin 29.

My invention consists in providing the auxiliary air-chamber 11 and in locating therein an auxiliary collapsible bellows 13, provided with a valve rod 16 and the valves 17 and 18, and in connecting this valve rod directly to the lever 23 below, providing also a spring 20 for controlling the valve movement.

I will now explain the operation of my device. When the key 30 is depressed, the opposite end of the lever 27 is raised, and the outer end of the lever 23 is tilted downward, opening the valve 18 and closing the valve 17. The air in the bellows 13 will then escape through the opening 19, and the pressure of the air in the chest 11, pressing downward upon the top of

the bellows, collapses the same, thereby relieving the pressure upon the under side of the valve 5, and as the bellows falls it pulls down the valve 5 by means of the pin 9 against the air-pressure in chamber 11 and against the weak pressure of the spring 6, and the air from the auxiliary chest 11 will then enter into the main chest 12 through the open valve and to the pipes of the organ. The opening of the valve 5 is therefore easy and gradual and by no means abrupt or violent, and when the pressure upon the key 30 is relieved a reverse action takes place, namely: the spring 20 returns the valve 18 to its seat, closing the opening 19 and at the same time opening the valve 17, allowing the opening below the valve 17 into the bellows 13, and the pressure of the air in the bellows being equal to that in the chest 11 the force of the spring 6 will return the valve 5 to its seat with ease, and the air is thereby cut off from the organ-pipe.

In my device upon touching the key the valve 18 is opened, allowing the air in the bellows 13 to escape, closing the valve 17, and the air rushing out from the bellows the latter will collapse, and the pressure of the air in the chest 11 upon the top of the bellows will tend to draw the valve 5 from its seat, even against the pressure of the spring 6. The pressure, therefore, upon the valve 5 is overcome, not by an equivalent pressure upon the key, but through the escape of the air from the auxiliary bellows, which opens the valve by the pin 9. It will thus be seen that the pull upon the valve is positive whenever the key is pressed, and the valve will be opened whether the bellows is tight or not. This pin 9, which connects the bellows 13 to the valve 5, is threaded above, so that it furnishes a means of adjusting the connection between the bellows and valve, and this adjustment may be made so delicate that a very slight pressure upon the key will operate the auxiliary bellows and its valve mechanism and open the main valve 5, admitting the air-blast to the organ-pipe.

What I claim as my invention, and desire to secure by Letters Patent, is the following:

1. In an organ, an auxiliary air-chamber 11, located below the main valve 5, and an auxiliary bellows in such air-chamber, having openings in it above and below, alternately closed and opened by the spring-controlled valves 17 and 18, mounted on the rod 16, connected directly to the key-controlled lever 23, substantially as shown and described.
2. In an organ, an auxiliary air-chamber provided with a bellows connected to the main valve, such bellows having inlet and outlet valves alternately opened and closed by pressure upon the key-lever, the latter connected with the valve-rod of such bellows, whereby the main valve 5 is positively opened by pressure upon the key, substantially as shown and described.

3. In an organ, an air-chamber located bellow the main wind-chest, an opening between such wind-chest and air-chamber normally closed by a spring-controlled valve, a bellows in such auxiliary chamber, having inlet and outlet openings on opposite sides, the main valve adjustably connected to the top of such bellows, a valve-rod passing through the latter, and valve mounted thereon whose action closes one valve when the other is open, such valve-rod connected to the pivoted lever directly operated by pressure upon the key, whereby the main valve is directly opened by the joint action of the key-pressure and the collapsing of the auxiliary bellows, all combined substantially as shown and described.

In witness whereof I have hereunto set my hand this 20th day of May, 1891.

THOMAS P. SANBORN²¹⁷

A photograph Thomas Prentice Sanborn's patented valve mechanism design is provided in figure 5e (page 108).

The manual windchests of the 1892 organ were of slider-pallet design with common note channels. Thomas Prentice Sanborn's signature bungboard clamps were used on these windchests, as well as on the Pedal chests. A photograph of these clamps (in the 1892 Sanborn) is found in figure 5f on page 144. The 1892 façade was composed of speaking pipes from the Great 16' Tenoroon, the 8' Diapason, and the 4' Octave while the wooden façade pipes were non-speaking. This façade was originally stenciled until c. 1938 when gold paint was used to cover the front of the pipes. The Swell division was located to the left of the Great and the Pedal was at the sides and divided C and C#. As mentioned in Chapter III, the layout of the façade was very similar to the Sanborn organ at Memorial Presbyterian Church, Indianapolis, Indiana.

Tonally, this instrument is comparable to the Opus 571, 1871 instrument for Music Hall in Providence, Rhode Island, by E. & G.G. Hook & Hastings. The Great

²¹⁷ Patent, No. 394,423.

division of both organs was based on 16' pitch and had several stops at 8' pitch. Sanborn's 1892 instrument featured five stops at 8' pitch and two stops at 4' pitch. The 1871 E. & G.G. Hook & Hastings organ and the 1892 Sanborn had an 8' Trumpet on the Great, as well as a Mixture and a 2 2/3'. The Swell divisions of both organs were based on an 8' Open Diapason and had a divided stop—the Oboe/Bassoon 8'. The Swell division of the 1892 Sanborn features a divided rank at 16' pitch, the Bourdon Bass and Bourdon Treble. For both the E. & G.G. Hook & Hastings organ and the 1892 T.P. Sanborn, the pedal division included two ranks of flue pipes at 16' pitch and one rank of flue pipes at 8' pitch. The latest rebuild of the 1892 Sanborn included a 16' Trombone. Curiously, Goulding & Wood chose to add a metal-resonator 16' Trombone despite the fact that many other instruments of the late nineteenth century, including the 1871 E. & G.G. Hook & Hastings organ, would have featured a smoother 16' Trombone made of wood.

In 1921 the instrument was rebuilt and electrified by Seeburg-Smith Company of Chicago, Illinois. Justus Percival Seeburg, a Swedish-born piano maker, and Frederick W. Smith, an English-born organ builder, both apprenticed with Robert Hope-Jones and built and maintained theater organs.²¹⁸ They did not typically have contracts for church organs, but since the organ at Old Centrum was rebuilt near the time their firm went out of business, it is possible they were desperate for work.²¹⁹ Electro-pneumatic pulldowns replaced the mechanical action, a five-horsepower Kinetic blower replaced the 1909 Kinetic blower, and a new detached console was constructed in a horseshoe

²¹⁸ Overall, "Pipe Organ Report," 4.

²¹⁹ Overall, "Pipe Organ Report," 4.

arrangement.²²⁰ The original reservoir remained intact, but the feeder mechanism was removed.

An organ recital was given at Central United Methodist Church by Charles Hansen, the organist at Second Presbyterian Church, Indianapolis, in May of 1923. This recital, which may have been the dedicatory concert for the Seeburg-Smith rebuild, featured works by Dudley Buck, Alexandre Guilmant, Felix Mendelssohn, James Rogers, Richard Wagner, and Théodore Dubois and concluded with an improvisation on the National Anthem.²²¹

In 1951 the Cave Organ Company replaced the Seeburg-Smith console with a Reisner Inc. (Hagerstown, Maryland) console (figure 5g, 145).²²² They also installed an electropneumatic chest and removed eleven pipes from the rear center of the façade. The Cave Organ Co. renamed the Swell Unison Bass a Gedeckt Bass and made a failed attempt to enclose the Great, a process that was never completed.

In the second half of the century, the congregation moved north and the area where Central Avenue United Methodist was located went from one of the wealthiest sections of Indianapolis to one of the poorest.²²³ Interstate 65 was built and this further decimated the neighborhood, essentially cutting it in half. On April 1, 2000, the Old Centrum Foundation was founded and the ownership of the church was transferred to the foundation.²²⁴ Old Centrum Foundation participated in maintenance of the building and provided financial assistance for sixteen nonprofit organizations. Central Avenue Church

²²⁰ Schnurr, "Old Centrum," 148.

²²¹ Schnurr, "Old Centrum," 148.

²²² Overall, "Pipe Organ Report," 4.

²²³ Schnurr, "Old Centrum," 148.

²²⁴ Schnurr, "Old Centrum," 147.

merged with Lockerbie Square United Methodist Church on July 1, 2006, and the congregation worshiped in the building at Lockerbie Square.²²⁵

The organ was not in use at Central Avenue United Methodist Church for twelve years and was in disrepair by the twenty-first century. It was partially restored by Reynolds Associates Organ Services, Inc., with the assistance of M.P. Rathke, Inc., for the 2007 Organ Historical Convention. Both companies donated materials and labor to get the instrument working again at an estimated cost of \$30,000, the majority of which was borne by Reynolds. The following stop list, including wind pressure and pipe scaling was provided by Reynolds for the 2007 Organ Historical Society Convention:

OLD CENTRUM (Central Avenue Methodist Church)

Indianapolis, Indiana

Thomas Prentice Sanborn – 1892

2 Manuals – 28 Stops – 32 Ranks – 1,859 Pipes

GREAT ORGAN – 15 Ranks, 915 pipes, approx.. 3’’ wind pressure. Original pallet and slider windchest. Tracker key and stop actions replaced by Seeburg-Smith.

C¹ = CC here [only]

STOP	COMPASS	NOTES
16’ Open Diapason	61 pipes	Scale 46 at 8’ C. #1 to #24 zinc; #25 to #61 spotted Metal. Slotted; sleeves on trebles. Marked “Teneroon” on original console
8’ Open Diapason	61 pipes	Scale 43 at C ¹ . #1 to #12; #13 to #16 spotted metal. Slotted; Sleeves on trebles.
8’ Dopppe Flute	61 pipes	Stopped wood. Scale 2 1/4’’ x 4’’ ID at 4’ C.
8’ Melodia	61 pipes	Open wood. Scale 2 1/8 x 2 3/4’’ at 4’ C. Inverted mouths.
8’ Gamba	61 pipes	Scale 58 at C ¹ . #1 to #12 zinc; #25 to #61 rich spotted metal. Slotted. Cone tuned above 1’.

²²⁵ Schnurr, “Old Centrum,” 147.

8' Dulciana	61 pipes	Scale 56 at C ¹ . #1 to #12 zinc; #25 to #61 rich spotted metal. Slotted. Cone tuned above 1'.
4' Octave	61 pipes	Scale 58 at C ¹ . #1 to #24 zinc; #25 to #61 spotted metal. Slotted. Cone tuned above 1'.
4' Concert Flute	61 pipes	Doppel Flute pipes. Scale 2 1/4 x 3 1/2 at 4' C.
2 2/3 Octave Quint	61 pipes	Scale 67 at C ¹ .
2' Super Octave	61 pipes	Scale 72 at C ¹ .
III Mixture 1 1/3	183 pipes	#1 to #25: 1 1/3, 1', 1/2; #26 to #37: 2', 1 1/3, 1'; #38 to #61: 5 1/3', 2', 2'.
8' Trumpet	61 pipes	Scale 4 1/2" at C ¹ .
8' Clarinet	61 pipes	Scale 1 1/2" at C ¹ .

SWELL ORGAN – 14 Ranks, 854 pipes, approx.. 3" wind pressure. Original pallet and slider windchest. Tracker key and stop actions replaced by Seeburg-Smith.

STOP	COMPASS	NOTES
16' Bourdon Bass		
16' Bourdon Treble	61 pipes total	
8' Violin Diapason	61 pipes	Scale 47 at 8' C. #1 to #12 zinc; #13 to #61 spotted metal.
8' Gedeckt Bass		
8' Gedeckt Treble	61 pipes total	ID = 1 1/2" x 2 1/4" at C ¹ .
8' Aeoline	61 pipes	Scale 71 at 4' C. Slotted; slide tuned. Cone tuned above 1'.
8' Celeste	61 pipes	Scale 71 at 4' C. Slotted; slide tuned. Cone tuned above 1'. Pipes and original console marked "Salicional". Possibly retuned as celeste at a later time.
4' Principal	61 pipes	Scale 60 at 4' C. C ¹ pipe inscribed "T.P. Sanborn" on lower lip.

4' Flute Harmonique	61 pipes	Scale 68 at C ¹ . Harmonic from C ²⁵ . Spotted metal. Slotted. Cone tuned above 1' C.
4' Violin	61 pipes	Scale 68 at C ¹ . Spotted metal. Slotted.
2' Piccolo	61 pipes	Single length, nonharmonic. 1/3 taper. Marked "Flageolet" on pipes and original console.
III Mixture 2'	183 pipes	#1 to #14: 2', 1 1/3', 1'; #15 to #37: 2 2/3', 2', 1'; #38 to #49: 2 2/3', 2' 2'. #50 to #61: 2 2/3' 4' 4'. Arched upper lips on all off-unison pipes. Low cutups.
8' Bassoon Bass		
8' Oboe	61 pipes total	Open resonators; tapered shallots. Scale 2 1/2", at C ¹ .
8' Vox Humana	61 pipes	Scale 1 3/4', at C ¹ . Half-capped resonators.

PEDAL ORGAN – 3 ranks, 90 pipes. Wind pressure approx. 3". Original pallet and slider windchests.

STOP	COMPASS	NOTES
16' Open Diapason	30 pipes	Open wood pipes.
16' Bourdon	30 pipes	Stopped wood pipes.
8' Cello	30 pipes	Open metal pipes. ²²⁶

The console (in 2007) had five pistons for each manual, a Great to Pedal reversible, two expression pedals, a crescendo pedal, a sforzando pedal, and a crescendo indicator above the swell. It also featured a thirty-seven note harp stop refurbished by Carleton Smith Organ Restorations. Seeburg-Smith had added this stop as well as a set of chimes to the organ in the 1920s. Both of these ranks were not used during the 2007 convention, but were included in a more recent rebuild that will be discussed later in this chapter. A recital was performed on Thursday, July 12, 2007, on the instrument at Old

²²⁶ Schnurr, "Old Centrum," 150–151.

Centrum by Charles Manning. Mr. Manning earned his bachelor's and master's degrees at Indiana University's Jacobs School of Music. Currently he serves as organist at St. Luke's United Methodist Church in Indianapolis, Indiana. Manning's program included:

Chaconne in G Minor	Louis Couperin 1626–1661
Schmücke dich, o liebe Seele	Johannes Brahms
24 Pièces en style libre, Opus 31 XIX. Berceuse	Louis Vierne 1870–1937
Trivium for Organ: II (1988)	Arvo Part b. 1933
Hymn: Praise, My Soul, the King of Heaven	LAUDA ANIMA
Intrada in E-Flat Major	Grayston Ives b. 1948 ²²⁷

In 2010, a seven million dollar project to renovate Old Centrum into a new state headquarters for the historic preservation organization was launched, which included rebuilding the 1892 Sanborn. Funds for this project were given by Bill and Gayle Cook, two Bloomington, Indiana-area philanthropists.²²⁸ At the request of Bill Cook, Goulding & Wood Inc., of Indianapolis was hired for the renovation project, and in February of 2010 Goulding & Wood personnel removed the organ from the old sanctuary. The building at that time did not have any electricity, so their work was done by flashlight and in winter attire.

Interestingly, Goulding & Wood is only half a mile away from Indiana Landmarks. The project was led by Mark Goulding. The pipes of the instrument were in

²²⁷ *Hoosier Holiday*, 15.

²²⁸ Schnurr, "Old Centrum," 150–151.

fairly good condition, although the scroll-tuned pipes were in more satisfactory shape than the cone-tuned pipes. The pipework was washed, fitted with tuning sleeves, and regulated by voicer Brandon Woods.²²⁹ All pedal stops were extended from a twenty-seven-note compass to a thirty-note compass. (The previous Reisner console had a standard thirty-note compass, but the pedal division had only twenty-seven speaking pipes for each rank.) Another feature added to the pedal division of the instrument was a metal-resonator, 16' Trombone built by A. R. Schopp's Sons, Inc.²³⁰ The façade pipes had originally been stenciled; Conrad Schmitt Studios of Milwaukee, Wisconsin, the company that restored the interior of the Grand Hall where the instrument is now located, stripped and re-stenciled the pipes and added gold leaf. Figure 5h (page 146) is a photograph of these pipes prior to the final painting. The original casework was restored, the apron paneling was extended to accommodate the room modifications, and a movable platform for the organ console was built to match this paneling.

Aside from the restoration of the case, façade, and pipework of the 1892 Sanborn, no attempt was made by Goulding & Wood to restore this instrument to its historic state as they deemed it "inappropriate and possibly impossible."²³¹ Seeburg-Smith had electrified the instrument in the 1920s and thus the original tracker action was no longer extant. Kurt Ryll designed a two-manual console that was patterned after the console of the 1902 Bernard Schaefer pipe organ in Saint Anthony Church of Evansville, Indiana.²³² This new console has a solid-state switching system and combination action, electronically regulated high capacitance rectifiers, and a one hundred twenty-eight level

²²⁹ Schnurr, "Old Centrum," 150–151.

²³⁰ Most organs of the late nineteenth century had a wooden 16' resonator reed in the pedal, which would generally produce a more fundamental tone than a metal pipe.

²³¹ Overall, "Pipe Organ Report," 8.

²³² Overall, "Pipe Organ Report," 11.

memory system with twelve General pistons, eight Divisional pistons for both the Great and the Swell, five Divisional pistons for the Pedal, a programmable Sforzando, and a sequencer.²³³ The stage floor at Indiana Landmarks Center was structurally rebuilt to support the instrument. A new three-phase, seven-and-a-half-horsepower motor built by the Marathon Electric Co. of Wausau, Wisconsin, was added to the fan from the Kinetic blower installed by Seeburg-Smith in the 1920s.²³⁴

All of the original main Sanborn windchests were replaced with new Goulding & Wood electro-pneumatic slider and pallet chests. The off-note chests were equipped with standard electro-pneumatic valve control systems. At least one of Sanborn's original slider/pallet windchests was kept and is in storage at the Goulding & Wood factory, but unfortunately, many original parts were discarded during the rebuild.

The organ cost between \$350,000 and \$375,000 to rebuild and was previewed at the Goulding & Wood shop before being reinstalled at the Indiana Landmarks Center in the spring of 2011.²³⁵ Dean Emeritus of the Indiana University Jacobs School of Music, Charles Webb, played a preview on February 16, 2011, and also was the recitalist for the dedicatory concert in April of that year. Unfortunately, Bill Cook (who provided the funds for the rebuild) died just weeks prior to the completion of the project and was unable to be present for the dedication of the space.²³⁶ Following is the specification of the instrument given for its dedication at the Grand Hall of Indiana Landmarks Center.

INDIANA LANDMARKS CENTER
Indianapolis, Indiana
Thomas Prentice Sanborn—1892

²³³ Overall, "Pipe Organ Report," 11.

²³⁴ Overall, "Pipe Organ Report," 11.

²³⁵ Overall, "Pipe Organ Report," 12.

²³⁶ Overall, "Indiana Landmarks," 28.

GREAT ORGAN

16' Open Diapason	61 pipes
8' Open Diapason	61 pipes
8' Doppel Flute	61 pipes
8' Melodia	61 pipes
8' Gamba	61 pipes
8' Dulciana	61 pipes
4' Octave	61 pipes
4' Concert Flute	61 pipes
2 2/3 Octave Quint	61 pipes
2' Super Octave	61 pipes
III Mixture 1 1/3	183 pipes
8' Trumpet	61 pipes
8' Clarinet	61 pipes
Tremulant	
Harp	
Swell to Great	

SWELL ORGAN

16' Bourdon Bass	(1–12)
16' Bourdon Treble	(13–61)
8' Violin Diapason	61 pipes
8' Unison Bass	
8' Gedeckt Treble	61 pipes total
8' Aeoline	61 pipes
8' Celeste	61 pipes (Former Aeoline)
4' Principal	61 pipes
4' Flute Harmonique	61 pipes
4' Violina	61 pipes
2' Flageolet	61 pipes
III Mixture 2'	183 pipes
8' Bassoon	(1–12)
8' Oboe	(13–61)
8' Vox Humana	61 pipes
Tremulant	
Swell Super	

PEDAL ORGAN

16' Open Diapason	30 pipes
16' Bourdon	30 pipes
8' Cello	30 pipes
16' Trombone (new)	30 pipes
Great to Pedal	
Great to Pedal Super	

Swell to Pedal
Pedal Combinations on Divisionals

Several of the ranks on this instrument were returned to their original 1892 nomenclature: the 8' Unison Bass (Gedeckt Bass 8'), the 2' Flageolet (2' Piccolo) on the Swell, and the 4' Violina (4' Violin). A Swell Super and Great to Pedal Super were added as well as a Tremulant on the Great. The entire organ is on 76mm of wind pressure with the exception of the 16' Trombone which is on 101mm. The following is the pipe scaling for the principal and reed ranks provided by Jason Overall from Goulding & Wood:

Rank	Scale (mm)	Mouth Width Cut-up		Remarks
Gt. 16' Tenoroon	272	1/4	1/4	
Gt. 8' Diapason	163	2/9	2/7	
Gt. 4' Octave	89	1/4	1/4	18 th halving
Gt. 2 2/3' Octave Quint	63	1/4	1/4	
Gt. 2' Super Octave	49	1/4	1/4	
Gt. 1 1/3' Mixture	39	1/4	2/7	
Gt. 8' Trumpet	120			German taper shallot
Gt. 8' Clarinet	40			
Sw. 8' Violin Diapason	149	1/4	1/4	17 th halving
Sw. 4' Principal	85	1/4	1/4	
Sw. 2' Mixture	53	1/4	1/4	
Sw. 8' Oboe	89			
Sw. Vox Humana	40			
Pedal Trombone	152	(A. R. Schopp's Sons)		

Mixture Composition:

GREAT	Rank I	Rank II	Rank III
C1	1 1/3'	1'	1/2'
C#26	1 1/3'	1'	2'
C#38	5 1/3'	1 1/3'	2'

SWELL

C1	2'	1 1/3'	1'
C#14	2'	2 2/3'	1'
C#38	2'	2 2/3'	1 1/3'
C 49	4'	2 2/3'	4'

According to Michael Rathke, there are a few minor discrepancies between Goulding & Wood and Reynolds's published pipe scalings, but these are likely the result of difficult and inaccurate onsite measurements inside a standing instrument that was in poor repair during the 2007 restoration work. The following chart is a comparison of the mixture compositions of the instrument as documented by Reynolds in 2007 and after Goulding & Wood's rebuild in 2010. As shown by this chart, the changes made by Goulding & Wood were minimal and few.

Reynolds's Restoration (partial), 2007
Mixture Compositions

GREAT

C1 1 1/3' 1' 1/2'
C#26 2' 1 1/3' 1'
C#38 5 1/3' 2' 2'

SWELL

C1 2' 1 1/3' 1'
C#14* 2 2/3' 2' 1'
C#38 2 2/3' 2' 2'
C#50 4' 4' 2-2/3'

Goulding & Wood Rebuild, 2010
Mixture Compositions

GREAT

C1 1 1/3' 1' 1/2'
C#26 2' 1 1/3' 1'
C#38 5 1/3' 2' 1 1/3'

SWELL

C1 2' 1 1/3' 1'
C#14* 2 2/3' 2' 1'
C#38 2 2/3' 2' 1 1/3'
C#50 4' 4' 2-2/3'

(underscores added above as noted)

Sanborn's original Great and Swell mixtures are notable in several respects. First, the Great mixture is based on the common pitch of 1 1/3' pitch, but instead of the more intuitive composition of 1-1/3', 1', and 2/3', it skips the 2/3' pitch and employs a 1/2' pitch instead. Second, Sanborn included a 5-1/3' rank in the Great mixture to add gravity and fullness in the treble portion of the compass. Third, as displayed by the

²³⁷ Overall, "Indiana Landmarks," 28.

following chart, the Great and Swell mixture compositions are complementary and could therefore be coupled together to good effect.

GREAT	C1		1 1/3'	1'	1/2'
SWELL	C1	2'	1 1/3'	1'	
GREAT	C1			1 1/3'	1'
SWELL	C#14	2 2/3'	2'		1'
GREAT	C#26		2'	1 1/3'	1'
SWELL	C#26	2 2/3'	2'		1'
GREAT	C#38	5 1/3'			2'
SWELL	C#38			2 2/3'	2'
GREAT	C#50	5 1/3'			2'
SWELL	C#50		4'	4'	2-2/3'

A photograph of the organ at Indiana Landmarks Center is provided in figure 5i on page 147. Due consideration was given the tonal character of the organ in retaining all Sanborn pipework at its original scales and wind pressure, but the manual windchests, console, and wind system are entirely new. This organ is thus considered a rebuild of the original 1892 Sanborn. The 1883 Sanborn and 1879 W. H. Clarke are therefore the sole surviving examples of instruments built by Thomas Prentice Sanborn in their “original” condition.

Thomas Prentice Sanborn was an important figure in nineteenth-century Indiana organbuilding. His innate technical ingenuity and organizational skills were shaped and enhanced through his training with two nationally renowned organbuilding firms, E. & G. G. Hook & Hastings and W. H. Clarke & Co. As a result, he developed quality organs that resembled theirs with respect to mechanical design and tonal style. An innovator in

his field, he secured two patents, one for a tremulant and one for a relief pallet valve design. The three surviving examples of his work—the 1879 W.H. Clarke for Sacred Heart of Jesus Roman Catholic Church, the 1883 T.P. Sanborn & Son for First German Evangelical Association, and the 1892 T. P. Sanborn & Son for Central Avenue United Methodist Church—all serve as worthy testimonials to this remarkable organbuilder and his craft.



Figure 5a. Central Avenue United Methodist Church, Indianapolis, Indiana
Photo Courtesy of DePauw University Archives and Indiana United Methodism



Figure 5b: T. S. & Son
Photo Courtesy of Goulding & Wood

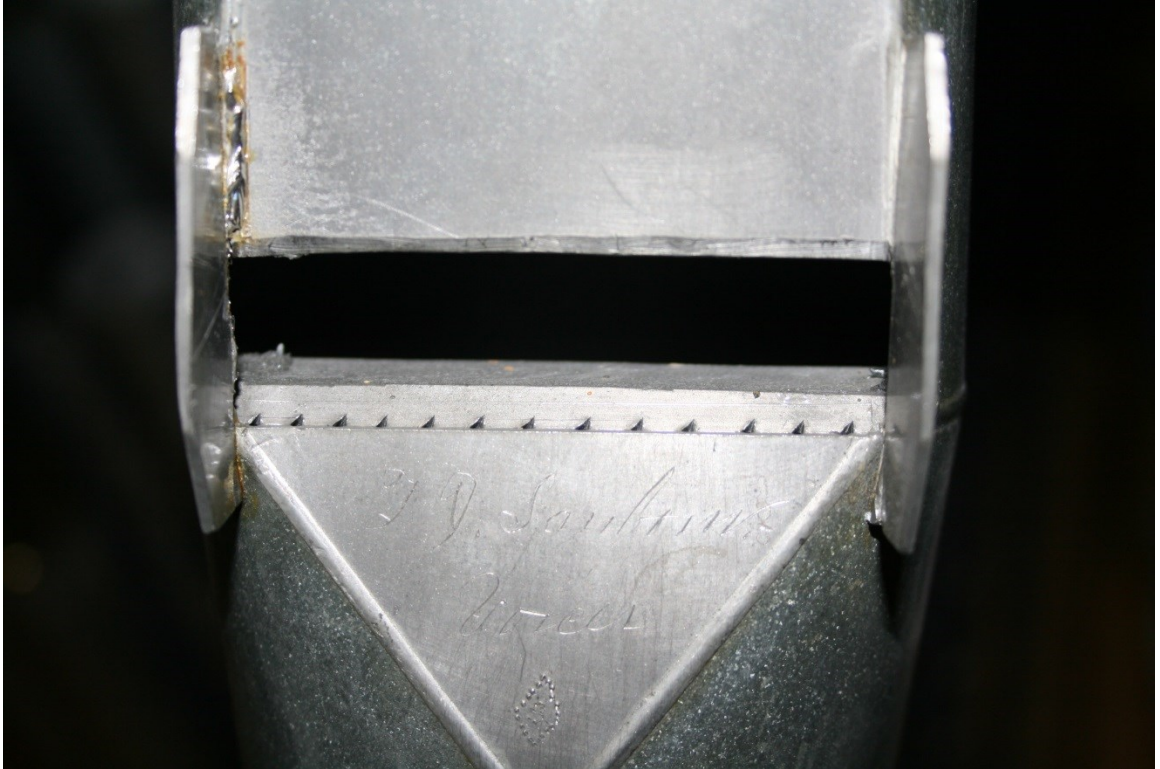


Figure 5c: T. P. Sanborn
Photo Courtesy of Goulding & Wood



Figure 5d. 1892 T.P. Sanborn & Son, Central Avenue United Methodist Church (1910)
Photo Courtesy of DePauw University Archives and Indiana United Methodism

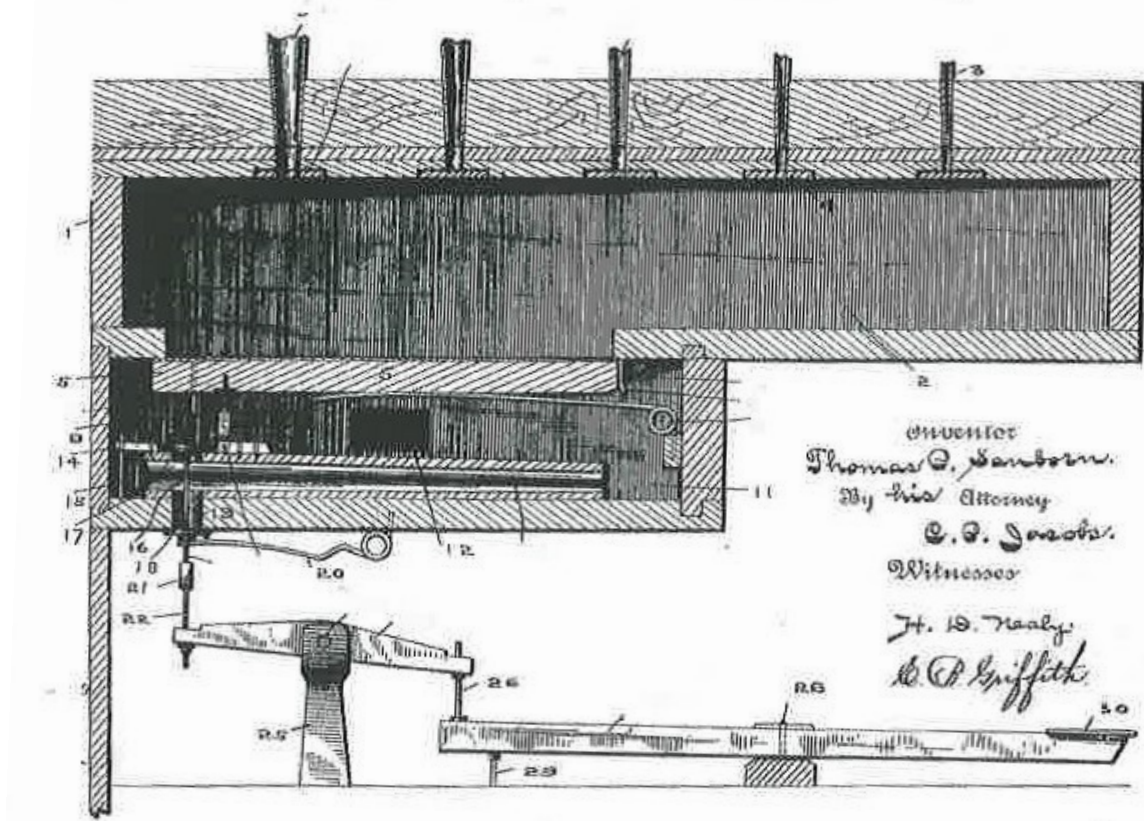


Figure 5e. Patent No. 394, 423, Thomas P. Sanborn²³⁸

²³⁸ Schnurr, "Old Centrum," 147.



Figure 5f: 1892 T.P. Sanborn, bungboard clamps
Photo Courtesy of Goulding & Wood



Figure 5g. 1892 Sanborn, Reisner console
Photo Courtesy of Goulding & Wood



Figure 5h. 1892 Sanborn, original Sanborn stenciling
Photo Courtesy of Goulding & Wood



Figure 5i. 1892 Sanborn, Indiana Landmarks Center, 2010 Goulding & Wood Restoration
Photo Courtesy of Indiana Landmarks

Appendix A: Glossary

Barker lever—a pneumatic system named for British engineer and organbuilder Charles Spackman Barker (1804–79). The Barker lever utilizes an organ’s own wind pressure to do the actual work of opening windchest pallet valves; the player’s fingers have only to open much smaller valves, which in turn energize the power pneumatics. The Barker lever allowed for the development of larger, more powerful organs utilizing higher wind pressures. This type of pneumatic assistance to the player was utilized extensively by Cavaillé–Coll, Willis, Hook & Hastings, and other builders on both sides of the Atlantic in the second half of the 19th century. The Barker lever is also known generically as simply *pneumatic lever*.

Beard—a physical addition to a conventional pipe mouth that aids in controlling speech. There are two basic forms: the roller beard, which is held in place between a pipe’s ears; and the box beard, which essentially extends the ears to wrap around the lower lip of a pipe.

Block (in a wood flue pipe)—the equivalent of a languid in a metal pipe: both serve to help direct wind from the foot toward the upper lip. It is located at the bottom of the air column between the foot and the upper lip.

Block (in a reed pipe)—the cylindrical metal plug, usually of lead, bored through for both shallot and tuning wire; it connects the air chamber of the boot with the air chamber of the resonator.²³⁹

Cap—The quadrangular wooden piece affixed to the front of a wood pipe below the mouth; its inside surface serves as the pipe's lower lip. It is usually made of walnut, cherry, maple, or some other close-grained hardwood.²⁴⁰

Common note channels—On a traditional slider/pallet windchest, identical notes (as played from the clavier) of all ranks are fed by the same key channel. When a key is pressed, the corresponding pallet opens, admitting wind into the key channel and, if a given slider(s) may be open, into the appropriate rank(s) of pipes.

Common metal—an alloy of tin and lead where the tin: lead ratio is between c. 20% and 45% and does not exhibit “spots.”

Curtain box—A box connected to a reservoir that helps regulate the flow of wind; it contains one or more curtain valves.

Curtain valve—A valve mechanism operating within a curtain box, so called because it variably covers and uncovers a wind passageway, much as a curtain or roller shade may be gradually or partially opened over a window.

²³⁹ Irwin, *Dictionary*, 11.

²⁴⁰ Irwin, *Dictionary*, 11.

Double-rise reservoir—A wind-regulating device that receives air from a manually operated bellows or rotary fan blower, stabilizes it at a given pressure, and stores it before it passes into the conductor system (wind ducts) and eventually the windchest. A double-rise reservoir utilizes two sets of folds instead of one; it has roughly twice the wind storage capacity as a single-rise reservoir of identical footprint.

Electropneumatic slider and pallet windchests—A type of slider/pallet windchest whose key action utilizes an electro-magnet to operate a primary pneumatic, which in turn energizes a power pneumatic, which ultimately opens the pallet valve inside the windchest.

Grand Orgue sur la Machine—a 19th-century console control that allowed the organist to draw stops on the Grand Orgue without having them sound until *Grand Orgue sur la Machine* was engaged. This allowed a number of registrational possibilities: for example, one could play the coupled Positive and Recit from the Grand Orgue keyboard without having any GO stops sound. Then with a single movement of a hand or foot, the full resources of the GO could be added to the mix, to dramatic effect.

Guide pins – any type of wood or metal pin used to guide or limit physical motion in any type of key or stop action.

Henry Pilcher's Sons—Henry Pilcher, Sr. was an organ apprentice in London, moving to New York and establishing a business in Newark, New Jersey. His sons, Henry Pilcher J. and William Pilcher II opened up an organ building shop (Henry Pilcher's sons) in St. Louis Missouri in 1852, later relocating to Chicago, Illinois. In 1944, the business was purchased by the M. P. Möller Organ Company of Hagerstown, Maryland.

Jump slider—A slider & toeboard added to either end (front or back) of a slider/pallet windchest sometime after the chest's original manufacture.

Off-note chest—A chest that sits apart from the main windchest, usually to accommodate large bass pipes.

Offset chest—See off-note chest.

Pallet - A valve, usually made of a wood faced with felt and leather, that admits wind into the key channel of a slider/pallet windchest.

Pneumatic assist—Small bellows that help to overcome the resistance of larger pallets (valves) in a mechanical-action organ's wind-chest.

Pull-down links—small lengths of leather that connect windchest pallets to the tracker action of the organ.

Rollerboard—in a mechanical action organ, an apparatus that transmits rotary motion laterally (rarely, front to back). It is composed of an actual board or frame, to which rollers are attached, as well as brackets to hold the rollers, and arms to extend from them. The rollers themselves can be wood or metal shafts, and rotate in a horizontal (rarely, vertical) configuration.

Silbermann School—Gottfried Silbermann, an 18th-century German builder of keyboard instruments, designed and built approximately 50 organs. Silbermann's instruments were characterized by strong reeds, a broad range of stops, and a distinctive bright tone.

Skiving—Cutting or scraping a bevel, usually applied to leather or pipe metal.

Slider/pallet chest—The slider/pallet windchest is defined by common note channels, over which all pipes of a given note (as played from the clavier) stand. When the organist activates a stop, the slider(s) will move so that wind holes for that stop align directly beneath the pipes, thus admitting wind to that rank when a note is played.

Spotted Metal—an alloy of approximately 50% tin and 50% lead, so called because of the surface mottling or spotting that occurs as the molten metal cools.

Square rail—Part of a mechanical key or stop action that changes the direction of linear motion, usually by ninety degrees. The levers within a square rail thus typically take the form of a right angle.

Stickers—Part of the mechanical action of an organ that transmits a pushing force.

Toeboard—A thick board placed atop a windchest, over its corresponding slider, upon which pipework stands and from which it receives wind.

Trackers—Part of the mechanical action of an organ that transmits a pulling force

Tubular pneumatic action—A type of key action type used during the late 19th and early 20th centuries. Here an organ's console is connected via tubing, usually lead – one tube per note - to the valves that control the delivery of wind to the organ's pipes.

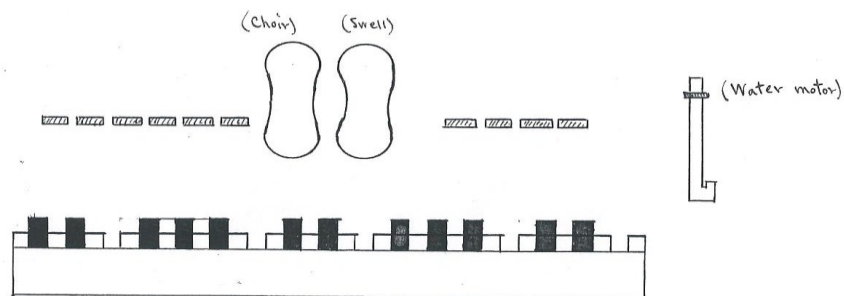
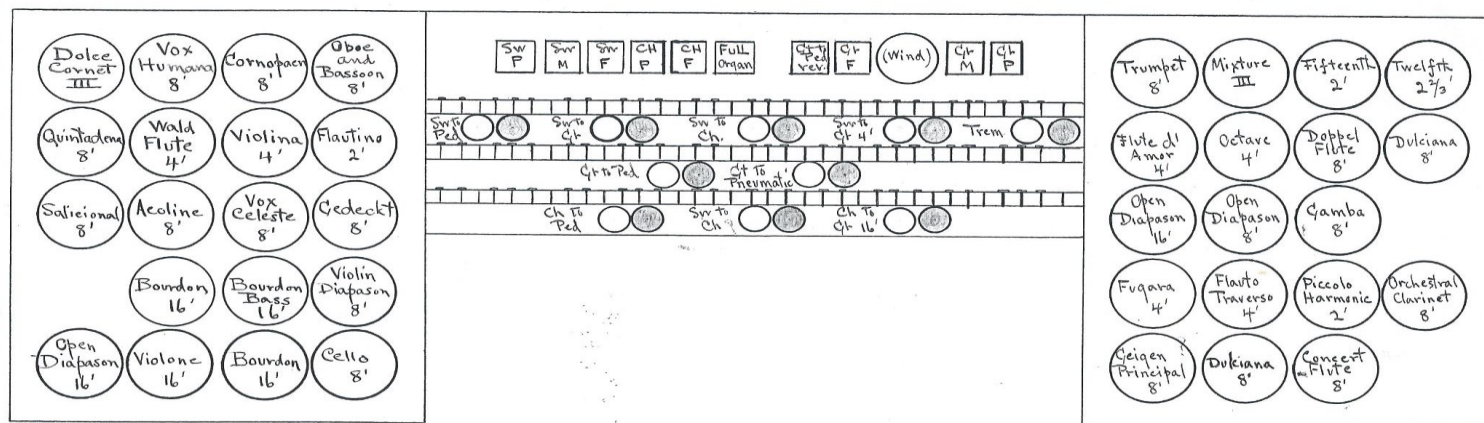
Tuning sleeves—Metal collars on the top of each pipe that can be adjusted for tuning purposes.

Windway—the thin slit between the languid and the lower lip in a metal organ pipe, or between the block and the cap in a wood organ pipe. In both cases the windway serves to admit and direct wind toward the pipe's upper lip.

Appendix B: Jesse G. Crane Collection

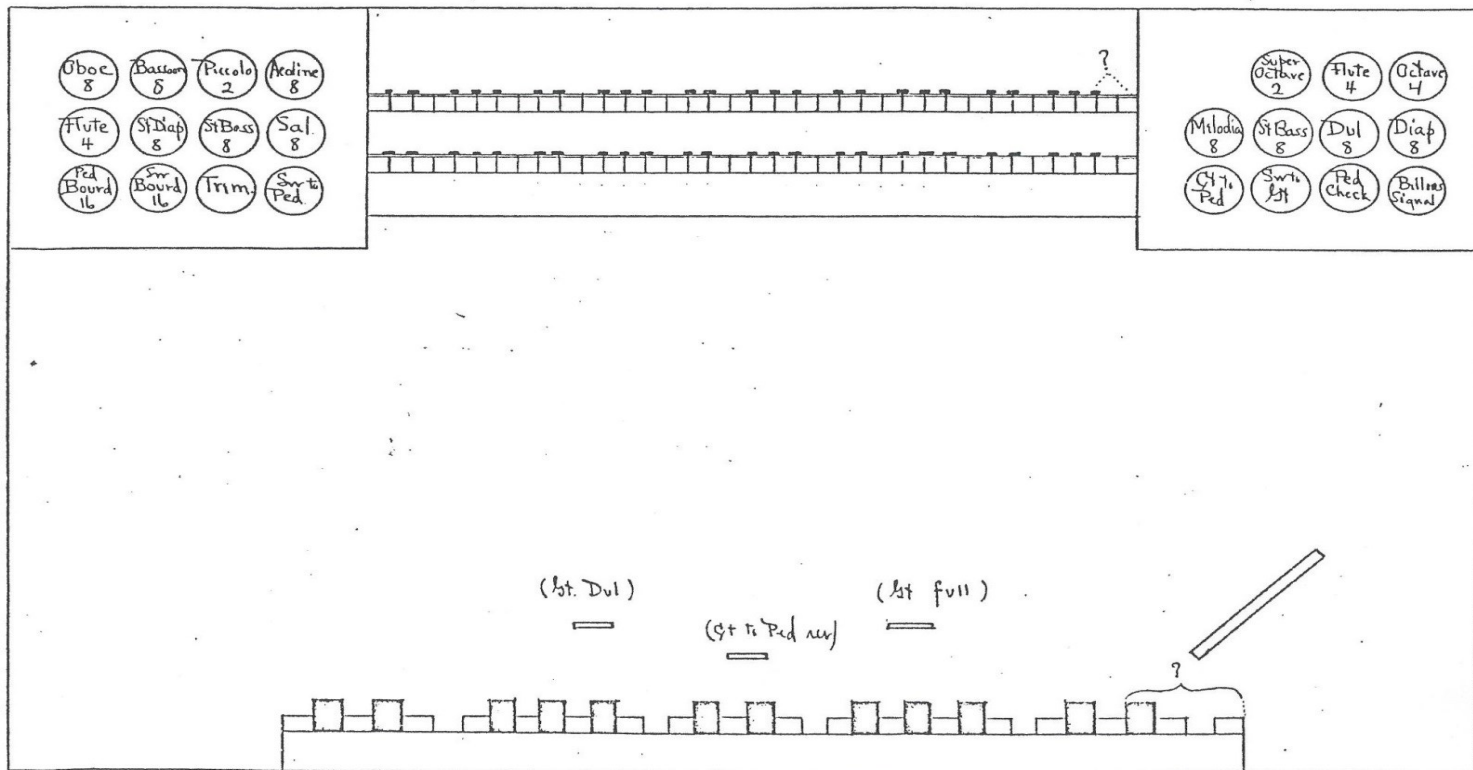
Organ in the Memorial Presbyterian Church

Water motor, Pneumatic levers.

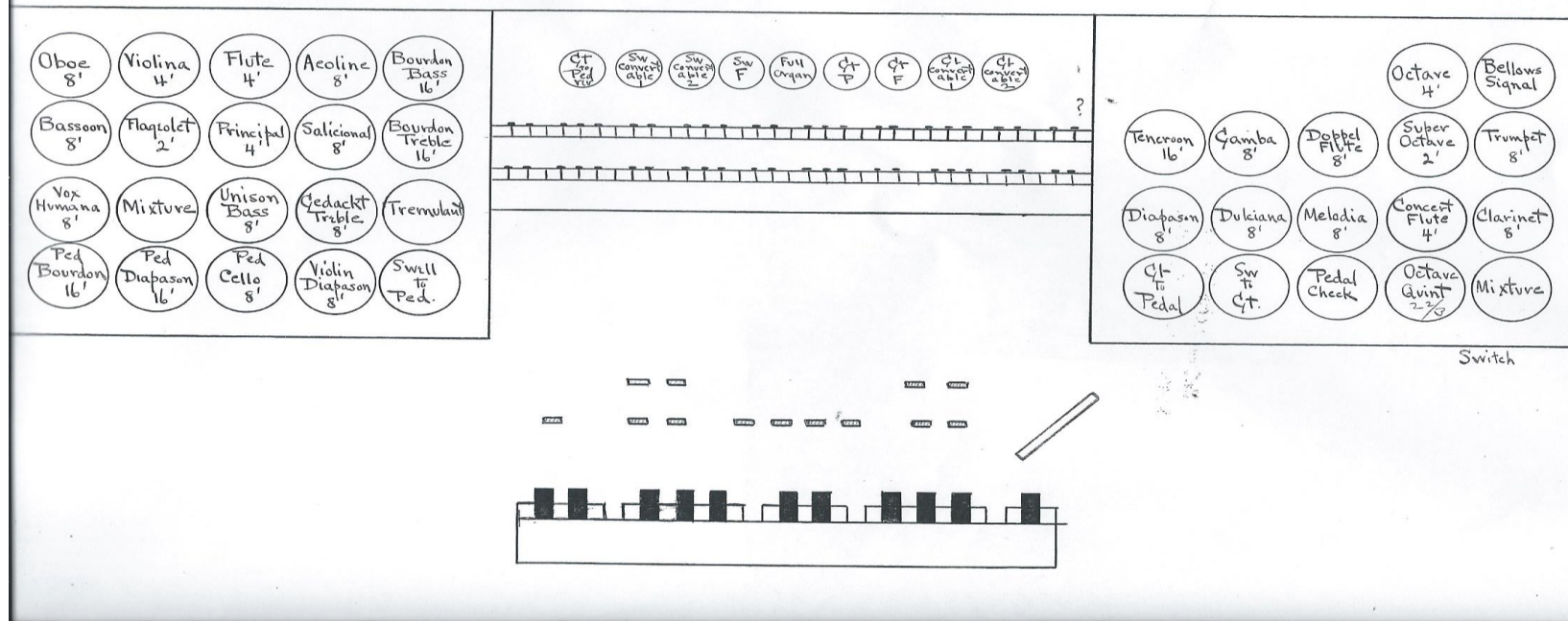


Organ in the First Church, Evangelical Association,
Indianapolis, Ind.
built by Sanborn.

on
Water
Motor



Organ in the Central Avenue Methodist Church.
 Sanborn.
 Tracker and Pneumatic Action, Electric Blower.



Appendix C: Samuel Pierce Price List, Wm. H. Clarke & Co. Advertisement



PRICE LIST.

METAL FLUE PIPES.

All pipes below Tenor F (3 ft.) Diapason pitch, to be made of the best zinc; and from Tenor F up, of "Spotted" or "Common" metal.

		Unvoiced.	Voiced.
16 ft. OPEN DIAPASON.	cc 58	\$285.00	\$292.50
<i>24 Fronts; Bead mouths; average scale and lengths.</i>			
8 ft. OPEN DIAPASON.	cc 58	71.50	77.25
<i>17 Fronts; Raised mouths; average scale and lengths.</i>			
8 ft. OPEN DIAPASON. All inside.	cc 58	64.00	69.75
" " " " " "	c 46	23.00	26.50
" " " " " "	F 41	17.50	20.50
" VIOLIN DIAP. or GEIGEN PRINCIPAL.	cc 58	54.00	59.75
" " " " " "	c 46	21.00	24.50
" " " " " "	F 41	16.00	19.00
" BELL GAMBA, or VIOL D'AMOUR.	cc 58	54.50	60.25
" " " " " "	c 46	21.50	25.00
" " " " " "	F 41	16.50	19.50
" KERAULOPHON, or VIOLA.	cc 58	45.50	51.25
" " " " " "	c 46	19.00	22.50
" " " " " "	F 41	14.50	17.50
" GERMAN GAMBA, or SALICIONAL.	cc 58	45.00	50.75
" " " " " "	c 46	18.75	22.25
" " " " " "	F 41	14.50	17.50
<i>(The above are "Bearded").</i>			
" DULCIANA, or AEOLINE.	cc 58	43.50	49.25
" " " " " "	c 46	18.00	21.50
" " " " " "	F 41	14.00	17.00
" VOIX CELESTES (2 sets of pipes).	c 92	36.00	43.00
" AEOLINE BASS (for Voix Celeste).	cc 12	25.50	27.75
" STOPPED ZINC BASS (Gamba or Dul.)	cc 12	15.50	18.50
" " " " (Geig. Prin.)	cc 12	19.00	22.00
" QUINTADENA, (movable caps) 12 zinc.	cc 58	32.50	38.25

METAL FLUE PIPES.

		Unvoiced.	Voiced.
8 ft. STOPPED DIAPASON.	c 34	\$12.75	\$15.25
" " " (with movable caps)	c 34	14.25	17.75
" BELL VIOLONCELLO EX. (all zinc).	cc 27	65.00	68.75
" " " No. 1.	" 27	51.50	55.25
" BELL VIOLONCELLO. No. 2.	cc 27	48.75	52.50
" VIOLONCELLO (straight).	" 27	46.50	50.25
6 ft. QUINT (Double Twelfth).	" 58	28.00	32.50
4 ft. PRINCIPAL or OCTAVE.	" 58	23.00	26.75
" FUGARA.	" 58	21.50	25.25
" VIOLINA.	" 58	20.00	23.75
" BELL VIOLIN.	" 58	23.00	26.75
" GEMSHORN (Tapering).	" 58	21.00	24.75
" FLUTE HARMONIC.	" 58	24.00	28.00
" " " "	c 46	15.50	18.50
<i>(double length from mid c)</i>			
" FLUTE DOLCE.	cc 58	22.50	26.25
" FLUTE A' CHIMINEE.	c 46	13.25	16.25
" " " (with movable caps)	" 46	15.50	18.50
3 ft. TWELFTH, or NAZARD.	cc 58	15.25	18.50
2 ft. FIFTEENTH, or FLAUTINO.	" 58	12.75	15.75
" PICCOLO.	" 58	13.50	16.50
" WALDFLUTE, or GEMSHORN (Tapering)	" 58	14.00	17.00
2 rk. MIXTURE. 19.22.	" 116	20.00	26.00
3 " " 15.19.22.	" 174	27.50	36.50
4 " " 19.22.26.29.	" 232	36.75	48.75
5 " " 15.19.22.26.29.	" 290	46.00	61.00
3 " SESQUIALTERA. 17.19.22. (Large)	" 174	27.50	36.50
3 " DOLCE CORNET. 12.15.17. (Small)	" 174	36.75	45.75

When all the pipes from Tenor C (4 ft.), Diapason pitch, are to be made of "Spotted," or, "Common" Metal, instead of from Tenor F (3 ft.) as in the foregoing list, add as follows:—

To 16 ft. OPEN DIAPASON.	\$3.00
" 8 ft. " " "	3.00

METAL FLUE PIPES.

To 8 ft.	VIOLIN DIAPASON, or GEIGEN PRINCIPAL.	cc	58	\$2.50
" "	BELL GAMBA, or VIOL. D'AMOUR.	"	46	1.50
" "	KERAULOPHON, or VIOLA.	"	58	1.50
" "	GERMAN GAMBA, or SALICIONAL.	"	46	1.50
" "	DULCIANA, or JEOLINE.	"	58	1.50
" "	VOIX CELESTES.	"	46	3.00
" "	BELL VIOLONCELLO, No. 1.	"	58	2.00
" "	BELL VIOLONCELLO, No. 2.	"	46	1.50
" "	VIOLONCELLO, (straight)	"	58	2.50
" 6 ft.	QUINT.	"	46	2.00
" 4 ft.	OCTAVE, of PRINCIPAL.	"	58	2.75
" "	FUGARA.	"	46	2.25
" "	VIOLINA.	"	58	1.50
" "	BELL VIOLIN.	"	46	1.50
" "	GEMSHORN.	"	58	1.50
" "	FLUTE HARMONIC.	"	46	2.50
" "	FLUTE DOLCE.	"	58	2.50

All prices given for metal flue pipes, cover for pipes of average scale, where scale is not specified.

REED PIPES—Voiced.

16 ft.	PED. TROMBONE.	Wood or metal.	ccc	27	\$160.00
8 ft.	PED. TRUMPET.	Large scale.	cc	27	61.00
16 ft.	CONTRA FAGOTTO.		"	58	155.00
"	TRUMPET.		"	58	187.00
8 ft.	TUBA MIRABILIS.	(Harmonic C ² to C ³)	"	58	88.50
"	CORNO D'AMOUR.		"	58	83.50
"	CORNOPEAN, Nos. 1 and 2.		"	58	83.50
"	"		"	46	43.50
"	CORNOPEAN, No. 3.		cc	58	80.00
"	"		"	46	42.00
"	TRUMPET, No. 1.		cc	58	80.00
"	"		"	46	42.00

REED PIPES—Voiced.

8 ft.	TRUMPET, Nos. 2 and 3.	cc	58	\$77.50
"	"	"	46	40.00
"	TRUMPET, No. 4.	cc	58	75.00
"	"	"	46	39.00
"	OBOE and BASSOON.	cc	58	67.50
"	OBOE.	"	46	38.50
"	"	F	41	29.50
"	BELL CLARINET (sliding bells).	cc	58	72.50
"	"	"	46	41.50
"	CLARINET (straight).	cc	58	67.50
"	"	"	46	38.50
"	FAGOTTO BASS (for clarionets).	cc	12	29.00
"	SAXAPHONE.	cc	58	70.00
"	"	"	46	40.00
"	VOX HUMANA.	cc	58	67.50
"	"	"	46	45.00
4 ft.	CLARION, No. 1. (Harmonic C ¹ to C ²)	cc	58	43.50
"	" Nos. 2 and 3.	cc	58	41.50

SCALES, MATERIAL, ETC.

Diameter of cc.	CORNOPEAN, No. 1.	6 1-2 inches.
" " "	No. 2.	6 "
" " "	No. 3.	5 1-2 "
" " "	TRUMPET, No. 1.	5 1-2 "
" " "	" No. 2.	5 "
" " "	" No. 3.	4 1-2 "
" " "	" No. 4.	4 "

The Clarionets, Saxaphones and Vox Humanas, are made of "Common" metal throughout; all others have "Spotted" metal bells, and zinc stems.

My metals are composed of pure Tin and Lead, and are never adulterated with other metals; the Spotted metal contains not

WOOD PIPE FEET.

$\frac{7}{8}$	inch bore	.	.	.	per hundred, \$2.50
$\frac{3}{4}$	"	"	"	"	" " 2.50
$\frac{5}{8}$	"	"	"	"	" " 2.50
$\frac{1}{2}$	"	"	"	"	" " 2.25
$\frac{7}{16}$	"	"	"	"	" " 2.25
$\frac{3}{8}$	"	"	"	"	" " 2.25
$\frac{5}{16}$	"	"	"	"	" " 2.25
$\frac{1}{4}$	"	"	"	"	" " 2.25

All made of Whitewood, and nicely finished.

KEYS, PEDALS, ACTION, ETC.

MANUAL KEYBOARDS.—Ivory.

ONE	MANUAL, with Black Walnut frame,	.	.	.	\$17.00
TWO	" " " " " "	.	.	.	34.00
THREE	" " " " " "	.	.	.	50.00

MANUAL KEYBOARDS.—Celluloid.

ONE	MANUAL, with Black Walnut frames,	.	.	.	\$15.00
TWO	" " " " " "	.	.	.	30.00
THREE	" " " " " "	.	.	.	44.00

PEDAL KEYBOARDS.

SET OF 27 KEYS.	Black Walnut and Maple,	\$17.00
" " 30 "	" " " " " "	18.00

ACTION PARTS, ETC.

No. 9.	PEDAL SQUARES,	.	.	.	per 100, \$ 4.00
" 2.	MANUAL "	.	.	.	" " 3.00
" 3.	" "	.	.	.	" " 3.00
" 13.	" "	.	.	.	" " 3.00

KEYS, PEDALS, ACTION, ETC.

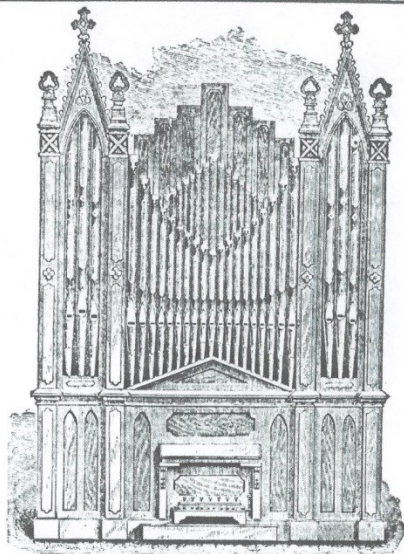
ACTION PARTS, ETC.

No. 8.	COUPLER JACKS,	.	.	.	per 100, \$ 2.00
" 6.	ROLLER STUDS, (<i>single</i>)	.	.	.	" " 1.10
" 7.	" " (<i>double</i>)	.	.	.	" " 1.10
" 4.	" ARMS,	.	.	.	" " .80
" 5.	" " " " " "	.	.	.	" " .80
" 11.	" " " " " "	.	.	.	" " .80
	RACK PILLARS,	.	.	.	" " 1.20
	BRASS PALLET SPRINGS. Two or three coil,	"	"	"	1.50
	IRON DRAW STOP SQUARES, (<i>right and left</i>)	"	"	"	8.00
	" " " " (<i>flat</i>)	"	"	"	7.00
	" COMBINATION PEDALS, (<i>plated</i>)	each	"	"	.50
	KEY REGULATING SCREWS,	"	"	"	1.00
	OBLIQUE FACED REGISTER KNOBS. Engraved,	"	"	"	.55
	STRAIGHT " " " " " "	"	"	"	.45
	(<i>These Knobs are turned from one piece of wood, not with shanks glued in, as in common kinds.</i>)				
	IVORY NAME PLATES;—Oblong. Engraved. Each.				1.50
	" " " " Diamond shape.	"	"	"	1.50
	BEST PALLET LEATHER,	.	.	.	per doz. 13.00
	" " BELLOWS "	.	.	.	" " 12.00
	" PNEUMATIC LEATHER, (<i>small</i>)	.	.	.	" " 9.00
	BRASS TAPPED TRACKER WIRES. Nos. 2 & 3, per lb.				1.23
	IRON " " " " " "				1.00
	LEATHER NUTS FOR TAPPED WIRES,	per 1000			1.50
	IRON HEEL & GUIDE PINS. Nos. 17, 19, 20, 21, per lb.				.30

I have in stock a large variety of Brass and Iron wires, tapped and plain, such as are used in pipe organs, and will send samples of all, when requested to do so.

I am also prepared to furnish wires of all kinds, made according to samples that may be sent to me.

Information in regard to any of my goods, will be cheerfully and promptly given.



WM. H. CLARKE & CO.
PIPE-ORGAN BUILDERS,
INDIANAPOLIS, IND.

Possessing extensive facilities for executing first class work in building Organs of every size, employing workmen of long practical experience, and referring to instruments of large musical capacity, made by them in the West.
Repairing of old Organs faithfully executed by competent men.
Water motors furnished and attached.
Correspondence will receive immediate attention. P. O. Box 110.
For financial responsibility to fulfill contracts of any value, reference is made by permission to Messrs. S. A. FLETCHER & Co., Bankers, Indianapolis, Ind.

FIG. 10, 1897.

REFERENCES.

Among many testimonials the following are inserted from Churches possessing Organs of Two and Three-Manual capacity, built by Messrs. Wm. H. Clarke & Co., of Indianapolis, Ind. Although their Single-Manual Organs are built with the same care, and have the same characteristic qualities as their larger instruments, yet a Single-Manual Organ is of a too limited capacity to be a representative instrument.

ROBERTS PARK M. E. CHURCH, INDIANAPOLIS.

A large Three-Manual Organ, containing 66 Draw-Stops, including 10 Pedal Registers, and is supplied with wind by Hydraulic power.

INDIANAPOLIS, FEB. 17, 1877.

MESSRS. W. H. CLARKE & Co.—*Gentlemen*: The large Organ you built for Roberts Park M. E. Church, in this city, does more than give perfect satisfaction. Its excellencies, as they are developed from Sabbath to Sabbath, are a constant surprise. Its praise is on the lips of all who hear it. It is an invaluable help to the service of praise, and in leading the congregation in song. It draws many lovers of music to the sanctuary. In our opinion it has no superior, and in this judgment several competent critics, who have heard the best instruments, both in Europe and America, have agreed, and we invite those who are about to contract for Organs to examine it.

Sincerely yours,

G. DE LA MATYR, *Pastor of R. P. M. E. Church.*
L. ARNETT, *President of Board of Trustees.*
W. L. BEISKELL, *Chairman of Organ Committee.*

FIRST BAPTIST CHURCH, INDIANAPOLIS.

A large Three-Manual Organ, containing 63 Draw-Stops, with Pneumatic Action. Baptistry in the Organ, and Key-Desk in the body of the Church front of pulpit, operated by Hydraulic power.

INDIANAPOLIS, IND., JAN. 10, 1875.

MESSRS. WM. H. CLARKE & Co.—*Organ Builders, Indianapolis, Ind.—Gentlemen*: In accepting this Organ, in behalf of the First Baptist Church of Indianapolis, we can not forbear to express to you our full satisfaction with the manner in which your contract with us has been fulfilled, both as to time and specifications.

The Organ itself bears ample testimony to the fact, that your standard for workmanship is of the highest order. In mechanical construction it is simply a model, while the wonderful effects produced by the noble instrument, when called forth by a master hand, sufficiently attest the rare musical genius which conceived and governed the entire work. It will stand in this sanctuary a monument of high art, grandly worthy to be used for the sacred purposes to which it is solemnly dedicated.

S. C. HANNA, JNO. A. FURGASON, M. A. WOOLEN, JR.,
E. C. ATKINS, D. V. BURNS, ALEX. SHAFFENBERGER,
A. A. BARNES, EDGAR J. FOSTER, H. C. MARTIN,
Trustees First Baptist Church, Indianapolis, Ind.

IN FRONT.

(3)

CALVARY CHURCH (EPISCOPAL), LOUISVILLE, KY.

An instrument containing Two Manuals, 40 Stops, located by the Chancel, with Reversed Action, and operated by Hydraulic power.

LOUISVILLE, KY., FEB. 15, 1877.

MESSRS. WM. H. CLARKE & Co., *Organ Builders—Gentlemen*: It gives me pleasure to certify as to the manner in which you have acquitted yourselves in building the Organ for Calvary Church. You have not only come up fully to your written contract, but have inserted additions desired by me not specified; and, although I expected a very superior instrument, you have indeed surpassed my highest expectations, and I may say, without fear of contradiction, that you certainly are artists in Organ building in the fullest sense of the word, desiring above all to give a perfect instrument.

The mechanical part is as near perfection as possible, the touch easy and prompt; not a single key has stuck since you put it up last October, although the weather has been quite damp. The Pedal Organ is solid in power, the Pedal Keys as easy of touch and as prompt as the Manuals, but the great beauty of the instrument is in the voicing, each Stop being a perfect imitation of the orchestral instruments intended to be represented. In this respect it stands unrivalled. The Diapasons and all the Stops are full and round, without being noisy, so that I can use the full Organ of forty Stops for a double quartette, and yet so distinct that the softest Stop will lead the voice in delicate passages. The Reeds are the best I ever heard in an Organ, having played on them four months without tiring them, using them frequently for solo combinations.

I therefore consider your Organs as ranking with the very best in the country, which leave nothing further to be desired, and I would add that I would not hesitate to have you build an Organ for me without a written contract, depending entirely on your word as gentlemen. I also find your new Hydraulic Motor perfectly satisfactory and very convenient.

Hoping that you may be as successful in your business as you deserve, I have the honor to remain,

Respectfully yours,

W. PLATO, *Organist Calvary Church, Louisville, Ky.*

FOURTH PRESBYTERIAN CHURCH, INDIANAPOLIS.

INDIANAPOLIS, FEB. 14, 1877.

MESSRS. WM. H. CLARKE & Co.—*Gentlemen*: The Church Organ built in your factory about three years ago, and placed in the Fourth Presbyterian Church of this city, has, I am pleased to say, given entire satisfaction. In purity and volume of tone, perfection of finish, ease and promptness of action, it is a noble instrument, worthy to lead the congregation in the service of song. Permit me to add that I have seen a number of your Organs, large and small, and am much pleased with them. Long may you live, and many organs may you build.

Yours truly,

E. B. MASON, *Pastor Fourth Presbyterian Church.*

FIRST CONGREGATIONAL CHURCH, KOKOMO, IND.

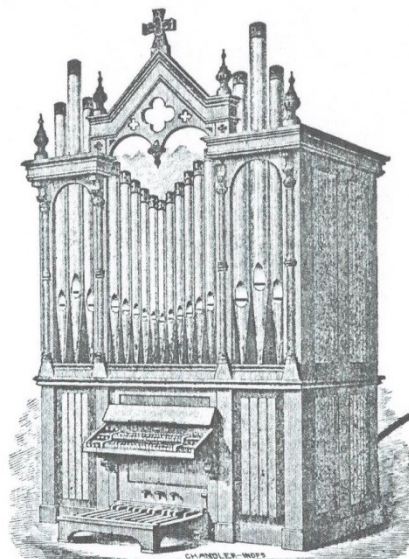
KOKOMO, IND., FEB. 1, 1877.

MESSRS. WM. H. CLARKE & Co.—*Gentlemen*: The Pipe Organ built for us by your firm, in 1875, has given satisfaction both in musical value and price, and we deem the money to have been well expended. The organ is sweet and powerful in tone, and the mechanical action is excellent. We can endorse your firm to any church desiring a thoroughly made and permanently good Organ. Your contract was fulfilled to the letter.

Yours sincerely,

ABEL S. WOOD, *Pastor First Congregational Church.*

IN FRONT.



THE above engraving represents the exterior of styles of Two-Manual Pipe Organs, entirely finished and always on exhibition at the Church-Organ Manufactory of Messrs. Wm. H. Clarke & Co., Indianapolis, Ind., in readiness to be set up at once whenever desired. These styles are alike in power and quality, and contain six hundred and sixty-two Speaking Pipes, Pedals of full compass, and twenty Draw-Stops. They are also uniform in price, from which there is no deviation. (See opposite page for description.)

IN FRONT.

MESSRS. WM. H. CLARKE & CO.
CHURCH ORGAN BUILDERS,
INDIANAPOLIS, IND.

DESIRE to call the attention of organists and church committees to a style of Two-Manual Pipe-Organ, containing twenty Draw-Stops and six hundred and sixty-two Pipes, and a full set of Pedals of twenty-seven notes, with independent 16 ft. Bourdon sub-bass, which they have constantly on hand for examination at their exhibition room in Indianapolis, Ind. These instruments are made in readiness for churches whose wants are immediate, and can be furnished and set up in the church, if not more than six hundred miles away, within three weeks after receiving the order. The workmanship, scales of pipes, etc., are of the same high class for which the larger instruments of this firm have gained an excellent reputation. The Wind-Chests are of full size, bellows ample, and the power remarkable, being voiced with reeds rare delicacy and evenness. The expressive capacity is more than is usual in Two-Manual Organs, from the fact that all the Great Manual Stops, excepting the Open Diapason, are also in the front being ten and one-half feet, resting on a belt six feet from the floor. The case is of neat organ-like design of black walnut with ash paneling, the center rising to a gable point, surmounted by the conventional cross, standing seventeen and one-half feet from the floor, with the bellows handle in on the right side. The Pipes ornamented in gold and nickel. While the exterior is attractive and imposing it is the rare musical capacity and variety of combination which cause them to be of superior artistic value. The intentional omission of Reed Pipes, which require frequent tuning, is a guarantee that these instruments will need but little tuning for many years, thus rendering them especially serviceable to remote churches. A competent man is sent with each of these instruments to attend to the setting up and tuning. The weight of one of these organs is about six thousand pounds, or three tons. Further description will be given in special correspondence. The specification is as follows:

Compass of Manuals from C₂ to c⁴ 61 notes.
Compass of Pedals from C₂ to D 27 "
Total number of pipes 662
Total number of draw-stop knobs 20

LOWER MANUAL.

1. 8 ft. tone Open Diapason, lower pipes in front, metal 61 pipes.
2. 8 ft. " Dulciana, from C³ in metal 49 "
3. 8 ft. " (St. Diapason Bass, wood 12 "
4. 8 ft. " Melodia Treble, wood 49 "
5. 4 ft. " Octave, metal 61 "
6. 2 ft. " Octave Quint, metal 61 "
7. 2 ft. " Super Octave, metal 61 "

UPPER MANUAL.

8. 16 ft. tone Manual Bourdon, from C³ in wood 49 pipes.
9. 8 ft. " (Unison Bass, wood 12 "
10. 8 ft. " Gedeckt Treble, wood 49 "
11. 8 ft. " Salicional, from C³, metal 49 "
12. 4 ft. " Flute Octavante, metal 61 "
13. 2 ft. " Flageolet, metal 61 "

PEDAL CLAVIER.

14. 16 ft. tone Bourdon Sub-Bass, wood 27 pipes.

MECHANICAL.

15. Coupler Lower Manual to Ped.
16. Coupler Upper Manual to Ped.
17. Manual Coupler.
18. Tremolo.
19. Bellows Signal.
20. Pedal Check.

COMPOSITION PEDALS.

1. Forte.
2. Piano.
3. Reversible Coupler, Lower Manual to Ped.

opp. 34a rev.

(2)

FROM RT. REV. JOS. C. TALBOT, BISHOP OF THE DIOCESE OF INDIANA.

INDIANAPOLIS, FEB. 26, 1877.

I take pleasure in expressing my entire confidence in the superior abilities of Messrs. Wm. H. Clarke & Co. as Organ-builders, and in their faithfulness and integrity as business men.
JOS. C. TALBOT, Bishop of Indiana.

CHURCH OF THE MESSIAH (UNITARIAN), LOUISVILLE, KY.

A divided Transpet Organ, with elaborate case, containing 33 Stops, Semi-Reversed Action, and blown by Hydraulic power.

LOUISVILLE, KY., FEB. 7, 1877.

THE undersigned, members of the Organ Committee of the Church of the Messiah, of Louisville, Kentucky, respectfully submit the following statements for the benefit of whom it may concern:

When we commenced our investigations of Organs and Organ builders, we sent carefully prepared specifications and drawings to eight firms in different parts of the country. Six of them were of acknowledged reputation, as ranking among the most eminent of the present day, and as having reputations co-extensive with civilization. Having some distrust of the other two firms (including Messrs. Clarke & Co.), based upon their limited experience, we continued our researches and correspondence for several months, and at the same time made personal examinations of the Organs built by the various firms with which we were in correspondence. This enabled us to draw more intelligent conclusions than we could otherwise have arrived at; and our unanimous opinion was that the Messrs. Clarke & Co., of Indianapolis, were producing instruments equal in every respect to those of any builders in this country; that Mr. Wm. H. Clarke, possessing as he does, superior attainments as an organist, is eminently qualified to judge of the requirements of an Organ for any place in which it is desired to place it, and his artistic tastes lead him to the most satisfactory results in construction, combination, voicing and general effect.

Messrs. Clarke & Co. are gentlemen of unquestionable honesty and veracity, and we believe will fulfill in spirit and to the letter any contracts they may undertake. The Organ furnished by them for this Church, is characterized by great power of tone, yet each Stop has an individuality that is not lost in combination. The materials, mechanism, and workmanship of the instrument are of the highest degree of excellence, and the whole effect pleasing and satisfactory. We take great pleasure in commending Messrs. Clarke & Co. and their Organs to the favorable notice of the public in general, and particularly to any Church or society contemplating the purchase of an Organ.

M. M. GREEN,
C. J. KENT,
CHAS. HERMANY,
Organ Committee.

FIRST PRESBYTERIAN CHURCH, DAYTON, OHIO.

DAYTON, OHIO, FEB. 1, 1877.

MESSRS. WM. H. CLARKE & CO.—Gentlemen: At the time our fine Organ, of thirty Stops, was built by you, and erected in the First Presbyterian Church of this city, in 1874, I expressed to you my entire approbation of the character of the work, which was in faithful agreement with the details of your contract. In regard to its musical qualities, it was pronounced by good judges to be superior to any other instrument in Dayton, and its good reputation was maintained until its recent destruction by fire—a loss to our society which we feel will be quite difficult to replace with a more satisfactory instrument.

Respectfully yours,
JOHN W. STODDARD, President Board of Trustees First Presbyterian Church.

to read.

Appendix D: Letters – Andrew Gingery, Michael Rathke

THE ORGAN FOR ST. FRANCIS IN THE FIELDS, ZIONSVILLE

The history of this organ is at present quite incomplete. We believe that it was moved to Sutherland Presbyterian Church (more recently Immanuel Presbyterian Church, and presently Salem Evangelical Baptist church) around 1920. We assume this because of some magazine scraps that were found used as shims under the slider-stays (which, presumably, would have dated from the move). The building also appears to date from that time. We also presume that the tonal resources of the organ were "updated" at that time, and that a considerable amount of work was done to the organ in addition to moving it. On the great, a 4' flute replaced a twelfth, and on the swell, an Aeolene was added on at the back of the chest. The keydesk was moved about a foot off center to accommodate an I-beam in the building.

We believe that the case installed in Sutherland was not the original. It was not the proper style, and had some tubular pneumatic actions for the case-pipes. That case was not retained, due in part because the church wanted to keep the facade for the next congregation, and also because it was exceptionally ugly. The facade pipes were originally stenciled, but through the years the pipes had been damaged and painted many times. Those pipes were not retained because a new case will require specially made pipes to fit in a new area.

At that time some work on the organ's mechanics was performed. While the design and workmanship of this organ is quite remarkable, the organ has suffered from the ravages of time. Some of the lumber was not thoroughly dried at the time of construction, which caused a number of boards to split. The pedal chest was repaired with leather and the swell table top had quite a few repairs done to it at the time it was moved. There was a name stamped into the table top of the swell chest, F. Herzsich, that I think came from that time, rather than from the original builder.

The organ's history before that time is quite a mystery. The organ's stoplist, method of construction, and it's general condition would indicate that it was made around 1880-1890. The only other clue we have as to its date is inside the swell box where it is inscribed "Dec. 1883".

We are involved in the complete restoration of the organ including the design and construction of a new case.

At the time of this writing much work has already been completed. The pedal chest had a new toeboard put on to the old grid. All of the pallets in all three windchests have been recovered in new felt and leather. The cracks in the table tops of the great and swell chests have had new wood inlaid into them. Or perhaps I should say old wood, reclaimed from a 1914 Hook & Hastings organ to minimize shrinkage. The chests had their key channels "flooded" with liquid paraffin to prevent any cross-channel runs. The chests, and all interior pieces of the organ will get a new lacquer finish. The reservoir, which was originally hand-pumped, has been releathered.

The action will be thoroughly rebuilt. The squares, rollerboards and backfalls will be retained in original condition

except where they need repairs. The trackers will all be new basswood.

The pipework has been cleaned and some of it has been re-regulated. All metal pipes will have new tuning sleeves, and all stopped wood pipes will have their leather replaced.

All leather parts in the organ (there are literally hundreds) will be replaced

A new, silent, blower will be incorporated into the organ.

A new case, the design of which has yet to be settled upon, will be built, using the lowest pipes of the 8' Open Diapason and perhaps the 4' Octave.

The keyboards will be cleaned and recovered where needed with new ivory.

When the organ has been completed in our shop, it will be disassembled and installed in the church balcony, regulated, tonally finished, and tuned.

As it stands now there are no tonal modifications to the organ, and the stoplist will be as follows:

Great: Open Diapason	8	Swell: Bourdon	16
Melodia	8	Stopt Diapason	8
Dulciana	8	Salicional	8
Unison Bass	8	Aeolene	8
Octave	4	Unison bass	8
Flute D'Amour	4	Flute Harmonic	4
Flautino	2	Piccolo	2
		Oboe & Bassoon	8
Pedal: Bourdon	16		

The Melodia, Dulciana, Stopt Diapason, and Salicional are tenor C stops served by the unison bass on their respective divisions. The Swell 16 is a tenor C stop without a bass. All other stops run throughout the compass of 61 notes in the manuals and 27 in the pedal. There are also couplers: Sw/Gt, Gt/Ped, and Sw/Ped. There is a Gt/Ped Reversible and double acting combinations on each manual.

Prepared by Andrew Gingery 2/28/89 Goulding and Wood Inc.

M. P. Rathke, Inc.

DESIGNERS, BUILDERS, AND CONSERVATORS OF MECHANICAL-ACTION PIPE ORGANS

18 April 2006

Professor Christopher Young
Indiana University School of Music
1201 East 3rd St.
Bloomington, IN 47405-2200

COPY

Dear Chris,

This letter contains the promised summary of additional and unanticipated work on the 1883 Thomas Prentiss Sanborn pipe organ for Indiana University, almost all of which pertains to key action. Per the terms of my original proposal, concealed damage (within which category most of the defects definitely fall) is specifically excluded from the [REDACTED] not-to-exceed figure. Accordingly, repairs of such items would technically be chargeable over and above.

After much consideration, however, I have chosen **not** to pursue this option for a number of reasons. First, it involves damage that, had I been of a suspicious nature, I could have at least in part ascertained for myself--albeit through a laborious and costly disassembly of the entire coupler stack and both manual action runs, plus a subsequent reassembly (given that the organ was still in use through November 2005). This would have been a risky, if retrospectively prudent, course of action, given that I had no guarantee of being awarded the Sanborn's eventual restoration at that time. (Getting St. Francis Church to agree to having the organ out of commission for an extended period might also have presented something of a challenge!) Second, as you acknowledged, my original estimate was based on a number of assumptions as to the extent and specifics of the 1988 work. That those assumptions proved to be partially incorrect is no fault of the university's. And third, it is becoming evident that this instrument was likely subject to some extremes of temperature (high) and humidity (low) during its 18 years in Zionsville which none of us could have anticipated. This last point is particularly relevant, as it suggests that at least some of the damage occurred after the 1988 work, rather than resulting from poor restoration practices at the time.

The 2006 key action work was originally specified as follows (excerpted from my proposal of 8 August 2005):

"Repair and/or replacement of broken, worn, or missing action parts including trackers, reinforcement of existing tracker ends in the traditional 19th-century manner...new felt and leather nuts, as required, and action setup/adjustment..."

In light of subsequent discoveries during actual restoration, the key action work as finally executed will include all of the above, plus the following:

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PROCEDURE

REASON

Replace all manual pallet felt & leather

The 1988 work used the thickest available (7/32"), really too heavy for this application and normally employed only for Pedal pallets. It was also badly trimmed - some was undercut so much that the pallet had never actually seated properly; some was left overhanging by up to 5/16" (!) in places. Not only did this add unnecessary sponginess and pluck, respectively, but the combination of overly thick material (which squished out laterally with time and use) and excessive overlap caused the felt & leather to rub against the pallet side guide pins, adding friction, as well.

Reflatten all pallets

A normal and necessary part of releathering.

Repair splits in pallet screw eye locations

Root holes for pulldown eyes had been drilled too small in an apparent effort to address insufficient penetration (a scant 3/16"!) into the pallet. This in turn caused some splitting from the wedging action of the screw threads. Some of the eyes had begun to show evidence of wallowing/pulling out, even so.

Plug holes from original pallet screw eyes

Necessary in order to provide pallet core integrity, as new screw eye root holes needed to be bored adjacent to old hole and split locations.

Procure and install new screw eyes

To provide more adequate purchase (c. 3/4") in the pallet bodies.

Shim pallets and reinstall some side guides

A surprising number of pallets from 1988 were not centered on the pallet slots, as evidenced by the pallets' original footprints. But the necessary 2006 flattening of pallets also narrowed them slightly (owing to their trapezoidal profile), which not only made shimming fairly straightforward, but may also end up in helping to reduce pluck somewhat.

Replace & modify leather pulldown links

This would not normally have been mandatory, as the 1988 set was in decent physical condition. But the 1988 trackers (retained in 2006), although in generally OK physical condition, were inconsistent in length, and they had no provision for adjustment between roller board and pallet box. In order to set up the key action properly, replacement links in several sizes had to be made new and/or modified.

Straighten and polish pulldown wires

Many had been bent, which may well have occurred during disassembly. But some had been previously scarred and scuffed, roughening the surfaces which pass through the pulldown bushings, and adding friction and abrasive wear.

Realign & adjust manual pallet springs

The normal orientation for a compass spring is in a single plane--that is to say, if the spring is laid on its side on a flat surface, it should rest relatively flat, with nothing twisted too far out of line. Virtually all springs in the Sanborn were bent well out of alignment, especially the feet relative to the legs, at angles approaching 20 to 25 degrees. This misalignment had at least two undesirable effects: it pushed the spring legs against the inside kerfs of the spring rail, and drove the pallets sideways into their guide pins (in addition to the normal upward pressure toward the pallet slot). Both conditions added friction and impeded pallets' proper seating.

Thin selected trackers before reinforcing

The replacement tracker material used in 1988 was on the average .065" thick. Unfortunately, the I.D. of the corresponding slotted roller and square arms (through which the trackers must pass) measures c. .060", which not only contributed to the trackers' tendency to fracture where they were binding inside the clearance kerfs, but also added friction. (We found numerous basswood trackers that had been compressed, imprinted, and stained by the tannins from their corresponding oak roller/square arms.)

Repair of squares, particularly the refastening of all axles, most of which were loose and/or falling out

This is one item which may well have been exacerbated by the environmental extremes in Zionsville (alluded to above and below).

Repair of badly split SW square rails

Ditto the above, but it is important to note that while conditions in Zionsville may have worsened this particular problem, it most definitely did not **cause** it. Someone had attempted--unsuccessfully--to close these splits by the expedient of driving in wood screws across the grain, rather than gluing in fresh wood and fastening the squares to it. The squares' retaining screws had long since stripped out in their holes and would simply spin free under light torque. Someone had then tried substituting larger retaining screws, which only worsened the splitting.

Flattening and polishing of manual keys

The organ would have functioned without this, but it would have been like playing teaspoons, at least in mid-compass. It is likely that at least some of this work was undertaken in 1988, as the keys showed evidence of previous careful reflattening.

Releathering of key tails and ramps

This leather was replaced in 1988, but with material that appeared to be gusset leather, which was not slick or tough enough to stand up to the wear and tear of stickers' being dragged across it by the normal operations of the couplers.

Repair of manual coupler pivot rail

This was necessitated by the sole design flaw we have found in the key action thus far: a cross-grain dado construction which left too small an amount of short grain supporting the rail's treble end. The original (pre-1988) repair had been carried out with nails, which proved not to be a good long-term fix.

Reshim all toeboards

This work was done in 1988 and apparently pretty satisfactorily. But it was accomplished in many cases via multiple strips of masking tape, which is not only hygroscopic (moving with humidity) but also tends to be squishy and to compress over time if more than a couple of thicknesses are used.

There were as many as 8 layers (almost 1/8") that had been applied to the toeboard bearers for several stops, and while the sliders moved freely when the organ was first installed in Bloomington, the weight of the pipework plus likely the lower winter humidity caused the shims to settle and shrink, causing a number of the sliders to bind.

Removal of excess melted paraffin from pallet slots and key channels

In 1988 the windchest channels, as part of the restoration, were poured out with melted paraffin wax. Although this technique is not so common as the use of glue or thick shellac, it is not unheard of and generally works OK--unless the ambient temperatures become excessive. This was evidently the case at Zionsville, possibly even prior to the installation of air conditioning. Depending on its exact formulation, paraffin will liquefy somewhere between 120° & 160° F, although it will sag or slump at slightly lower temperatures. Thus, the Sanborn must have been subjected to conditions well in excess of 100+° F during the last 20 years, which may help explain a number of other issues.

In closing, I would emphasize two things: First, I am in no way trying to impugn the 1988 work, which for the most part was carried out well. In particular, the design and provision of an attractive case and facade in period style, as well as museum-grade repairs to the windchest tables--especially the use of old pine salvaged from a 1914 Hook and Hastings (to ensure the new material would match the original as closely as possible in terms of grain, species, and moisture content)--all fall squarely within the category of going far above and beyond, and should be commended. One could have wished for more careful attention to certain details--the pallet leather and pulldown eye situation, as well as the jury-rigged repairs to the split square rails being the most disappointing--but the fact remains that most of the rest of the 1988 work was done with evident care and skill. Second, as we have discussed, the above conditions will not prevent but will unfortunately delay further the completion of a full restoration, to which I will continue to devote all available time and resources.

As you know, the not-to-exceed figure was in fact met and exceeded over two weeks ago, and all further work continues to be on MPR Inc.'s nickel. So be it. The Sanborn is too important, and stands to be too fine an instrument when restored, for me even to consider taking any shortcuts, however tempting. The job will be simply be finished as quickly as possible and to the best of our abilities. Per the terms of our agreement, I have not yet submitted a final invoice--the last remaining 20% of the original not-to-exceed figure--and I have no plans to do so until the instrument's restoration is complete.

I would ask that you share this report with all involved at the university and the church, and I encourage you to contact me with any questions.

Thanks,

Michael Rathke
President

cc: Goulding & Wood, Inc.

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